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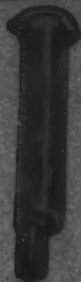


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Frisk, Diding and Wallmark,
J.A.M.A., 14:1384, Aug. 1, 1953

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Husted, Joel R., Boulder
Medical Centre, Rocky Moun-
tain Medical Journal, April, 1953

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Vol. II, No. 5, 1955

ANTIBIOTICS NEWS AND NOTES

CHILE: BROAD-SPECTRUMS "POWERFUL WEAPON" AGAINST AMEBIASIS - Terramycin* (brand of oxytetracycline) and chlortetracycline constitute a "powerful weapon" against intestinal amebiasis, in the view of investigators at the University of Chile. Terramycin was given to 69 patients, chlortetracycline to 45. Of 47 patients treated with Terramycin and followed for 8 days, 46 (97.8%) were negative; after 3 months 41 of 49 were negative (87%). Of 45 patients treated with chlortetracycline, 36 (80%) were free of parasites up to 2½ months after treatment. Terramycin dosage: 250 mg. q. 6 h. for adults; 25 mg./Kg./day for children.

Faiguenbaum, J.; Sangüesa, M.; Donckaster, R., and Miranda, M.:
Rev. med. Chile, Suppl. No. 5:32 (Sept.) 1954.

GERMANY: REPOSITORY PENICILLIN ACTS IN SCARLET FEVER - Benzathine penicillin G, used in treating 185 children with scarlet fever, brought improvement in general condition in 24-48 hours, recovery without complications or relapses following 5 days' treatment. In 66 children with cultures positive for hemolytic streptococci, smears became negative in 24 hours in 46, 48 hours in 17, 72 hours in 3. Dosage: 75,000-300,000 units orally t.i.d., depending on age. It is recommended that vitamin B complex be given along with the penicillin.

Albrecht, U.: Deutsche med. Wchnschr. 80:76 (Jan. 14) 1955.

ENGLAND: TETRACYCLINE PREFERRED IN SONNE DYSENTERY - In small series, tetracycline† proved superior to phthalylsulfathiazole and oral streptomycin in effecting bacteriologic cure of dysentery due to *Shigella sonnei*. In 27 cases treated with tetracycline there was only 1 failure. Eleven of 32 patients given sulfonamide and 9 of 25 given streptomycin responded. All strains of *Sh. sonnei* tested were sensitive to 4-8 mcg. tetracycline per ml. Tetracycline was given orally for 7 days: 125 mg. q. 6 h. for children under 5, 250 mg. q. 6 h. for children 5-15, 500 mg. q. 6 h. for older patients.

Abbott, J. D., and Parry, H. E.: Lancet 1:16 (Jan. 1) 1955.

*Trademark of Chas. Pfizer & Co., Inc.

†Available as Tetracycline (Trademark of Chas. Pfizer & Co., Inc.)

TERRAMYCIN INTRAMUSCULAR: THERAPEUTIC LEVELS "EASILY" MAINTAINED - A study of simultaneous serum and cerebrospinal fluid levels of Terramycin* (brand of oxytetracycline) demonstrates that therapeutic plasma levels of 1.25 to 2.5 mcg./cc. of Terramycin "can easily be maintained" for 8 hour periods using 12 to 18 mg./Kg. doses, intramuscularly. Eight patients with meningeal inflammation "consistently" showed levels between 1.25 and 5 mcg./cc. of spinal fluid. In 5 "normal controls" without central nervous system inflammation, only "minimal amounts" of Terramycin were detected in the spinal fluid. Terramycin alone was employed in the 8 patients with purulent meningitis (meningococcus 5; *H. influenzae* type B, 1; pneumococcus, 1; 1 type undetermined). Seven "responded promptly to therapy and recovered without neurological sequelae." Terramycin intravenous was given initially, then Terramycin intramuscular. Dosage ranged from 50 to 100 mg./Kg./day.

Koch, R.: J. Pediat. 46:44 (Jan.) 1955.

IN SHOCK, WHEN FLUID-VOLUME THERAPY FAILS, this refractory state may be due to a "bacterial factor that has become operative..." suggests Fine. He presents evidence that irreversibility of hemorrhagic shock in dogs is due to bacterial action, may be prevented by antibiotics (Terramycin, chlortetracycline, neomycin) given before bleeding. Antibiotics presumably act "not by the suppression of intraintestinal bacteria, but by suppression of toxin production by bacteria in the tissues." "Antibiotics with the broadest range are required for maximum protection." "If these considerations...are valid, they are even more so when fluid-volume therapy fails in shock associated with wounds, burns or other types of massive tissue injury in which bacterial contamination may be taken for granted." Fine's unpublished data "demonstrate that effective antibiotics do indeed act as antibacterial agents, and not because of some other protective pharmacologic property."

Fine, J.: Internat. J. Anesthesia 2:29 (Sept.) 1954.

STREPTOMYCIN-ISONIAZID COMPOUND BENEFICIAL - Streptohydrazid* (brand of streptomycylidene isonicotinyl hydrazine sulfate), when given intermittently (1.4 Gm. twice weekly) appears "substantially equal in effectiveness" to daily isoniazid in pulmonary tb, report Payne and co-workers. Study included 74 patients, 36 previously untreated, 38 who had received daily isoniazid, daily PAS or intermittent streptomycin. Bacteriologic, roentgenographic and clinical evidences of improvement in both groups were "significantly similar" to those obtained with established regimens. Moreover, intermittent Streptohydrazid "offers attractive possibilities as a maintenance program" in miliary, meningeal and acute pneumonic tb.

Payne, H. M.; Quarles, C.; McKnight, H. V.; Ellison, O.; Harden, K. A.; Syphax, G. B., and Turner, O. D.: Am. Rev. Tuberc. 70:701 (Oct.) 1954.

SOUTH. MED. ASSOC.: LUNG ABSCESS RESPONDS TO PENICILLIN - "With the increasing number of available antibiotics, we believe that almost all pulmonary abscesses, regardless of the duration of the disease, can be managed medically." Since 1950, Shoemaker, Byrd and Yow have obtained 90% cure rate with penicillin in the treatment of acute lung abscess. "The chronic abscesses have also been more successfully treated with fewer complications, less morbidity and fewer deaths." The investigators recommend administration of aqueous penicillin I.M., 300,000 units q. 4 h. for 10 days, then substitution of long-acting penicillin, 300,000 units b.i.d.

*Trademark of Chas. Pfizer & Co., Inc.

Sulfonamides may be given simultaneously. Where penicillin resistant organisms become a problem, other antibiotics are added or substituted, depending on the results of direct sensitivity studies. "Initial supportive therapy in the form of bed rest, along with good diet, vitamins and transfusion for anemia are an essential part of therapy."

Shoemaker, E. H.; Byrd, W., and Yow, E. M.: Paper presented to Southern Medical Assoc., 48th Annual Meeting, St. Louis, Mo., Nov. 8, 1954.

STEROID STUDIES

ENGLAND: LOCAL HYDROCORTISONE COMBATS SOFT TISSUE LESIONS - Hydrocortisone* "appears to be of great value" in treating acute nonspecific lesions of soft tissues, according to a report from London. It "proved most effective" in the treatment of of such lesions as tennis elbow, golfer's elbow, acute and chronic bursitis, tenosynovitis, trigger finger, Dupuytren's contracture, other lesions of the shoulder joint and acute traumatic effusions without injury to bone or ligaments. Of the 209 patients treated with a total of 350 injections, 80% experienced "complete resolution of symptoms." No dressing, splinting or physiotherapy was given during the period of observation. Hydrocortisone is "without question the treatment of choice in tennis elbow and golfer's elbow..." and "is valuable in hastening the recovery" of recent intra-articular and periarticular injuries of the soft tissues. Most of the acute shoulder lesions "responded dramatically." In the painful tender indurated areas in muscle, musculotendinous regions and tenoperiosteal junctions following trauma, "results were often dramatic and considerably shortened the periods of physiotherapy otherwise often required." Usual dosage was 25 mg. of hydrocortisone acetate in 1 ml. suspension, mixed with 1,000 units hyaluronidase in 25 ml. 2% procaine. "The only untoward reaction observed was transient urticaria following the injection of a knee joint."

Crisp, E. J., and Kendall, P. H.: Lancet 1:477 (March 5) 1955.

ITALY: TOPICAL HYDROCORTISONE CLEARS PLEURAL, PERICARDIAL EXUDATION - Hydrocortisone injected into the pleural cavity causes disappearance of exudate in both pleural and pericardial cavities, according to a report from Milan. In 7 patients with unilateral or bilateral pleurisy, 3 with pleuropericarditis, mostly of rheumatic origin, exudate "disappears completely" in 1, 2 or 3 weeks depending on seriousness of the case. Following partial drainage when necessary, 75-100 mg. hydrocortisone was introduced. Usually one injection sufficed; when initial results were only partially successful, injection was repeated once or rarely twice at 6 to 8 day intervals.

Ballabio, C. B.; Sala, G., and Amira, A.; Dis. Chest 27:190 (Feb.) 1955.

GENERAL MEDICINE

NASAL DECONGESTION WITHOUT REBOUND - Tyzine† (brand of tetrahydrozoline) offers "positive advantages" over other topical vasoconstrictors used as nasal decongestants, concludes Menger from a study of 203 patients, including 33 children aged

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18 months to 12 years, suffering mainly from the common cold or nasal allergies. A 0.1% aqueous solution gave "significant benefit" in all but 1 patient. The vasoconstrictive response usually lasted 4 hours and, by repeated administration when needed, relief could be maintained continuously for as long as 2 weeks. Bed-time instillations gave relief that lasted through the night. Tyzine was free of adverse local and systemic reactions. "The absence of rebound congestion, even with the use of Tyzine solution for as long as two weeks, was particularly noteworthy."

Menger, H. C.: N.Y. State J. Med. 55:812 (March 15) 1955.

MULTIVITAMINS PREVENT POSTOPERATIVE MALNUTRITION - Nutritional deficiency and anemia due to impaired absorption following gastrectomy and gastroenterostomy "can be avoided or controlled by adequate amounts of vitamins, especially thiamin, riboflavin and ascorbic acid, and the anti-anemic factors." Fluid intake should be restricted, chilled drinks avoided. A high protein, low carbohydrate diet "seems to be better tolerated."

Duncan, W. H., and Centner, P. J.: Clin. Med. 2:41 (Jan.) 1955.

BIOFLAVONOID CONFERENCE: VITAMINS BENEFIT POLIO PATIENTS - Boines (Wilmington General Hosp., Delaware) cites his experience with some 200 polio patients. "Abnormal capillary fragility was found in all of our severe acute polio cases." Daily administration of hesperidin and vitamin C (600 mg. of each) was maintained until capillary integrity improved. In 80% of patients, "this occurred in an average of 5 weeks." Within 1 week, patients experienced a sense of well-being and increased appetite; the affected limbs felt warmer to the touch in about 2 weeks. The author believes that improvement of capillary fragility "resulted in a definite enhancement in the patients' response to overall management."

Boines, G. J.: Conference on Bioflavonoids and the Capillary, The New York Academy of Sciences, Feb. 11, 1955.

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1. Pollack, H., and Halpern, S. L.: Therapeutic Nutrition, National Academy of Sciences, National Research Council, Publication 234, Washington, D.C., 1952, p. 54.

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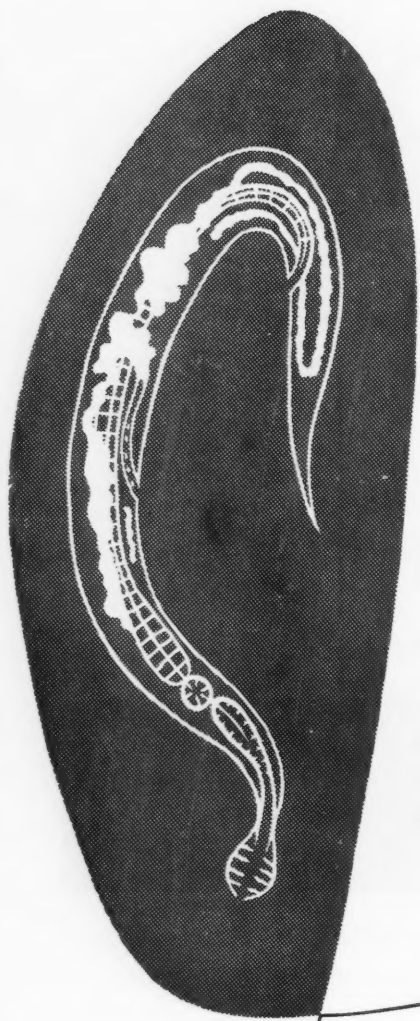


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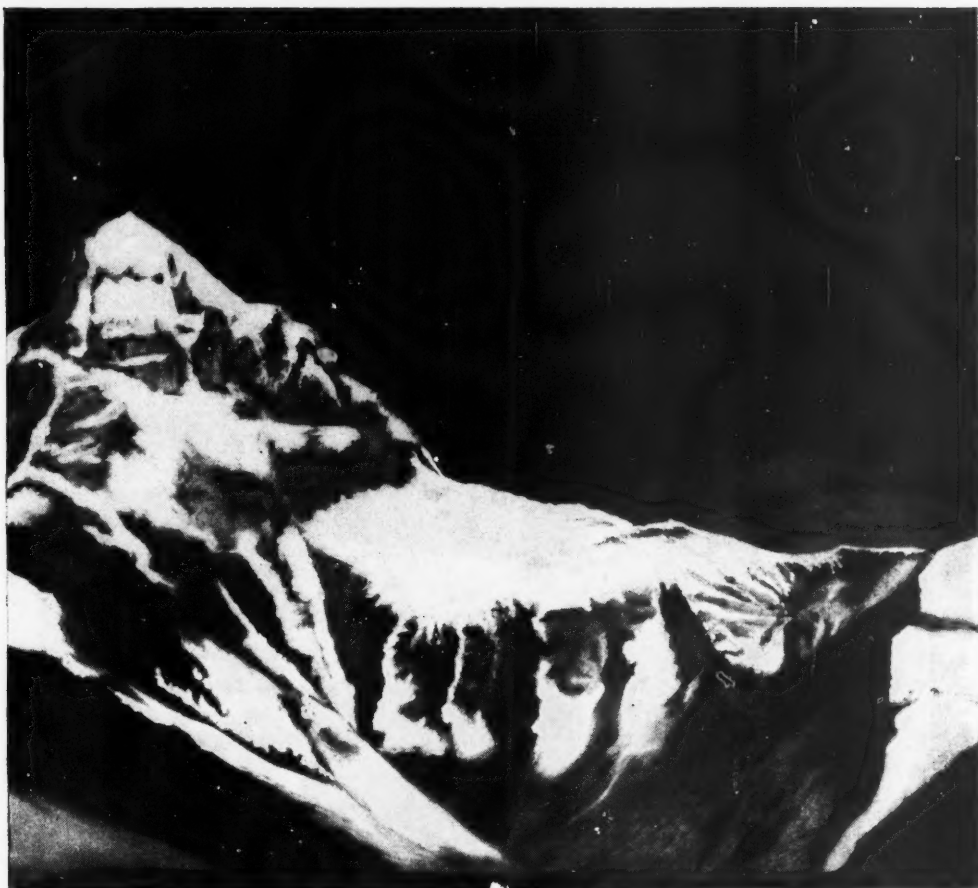
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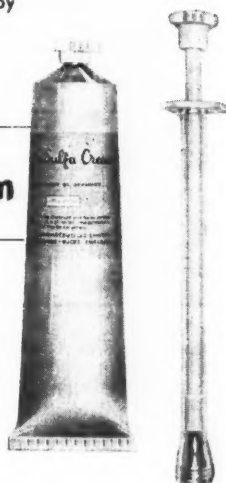


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| 1. Am. J. Obst. & Gynec. 58:176. | 1949 |
| 2. Am. J. Obst. & Gynec. 55:511 | 1948 |
| 3. Am. J. Obst. & Gynec. 61:680 | 1951 |

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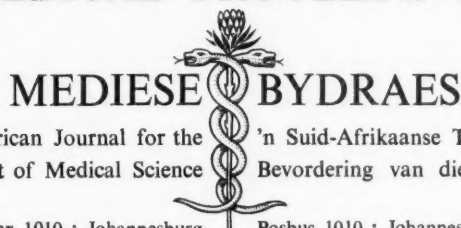
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Vol. I

Julie 1955 July

No. I

EDITORIAL

THE TRILEMMA OF MEDICAL PRACTICE

POST-GRADUATE OPPORTUNITY IN SOUTH AFRICA

In 1948 the Transvaal became a laboratory in which the medical profession and the public were the guinea pigs in a social experiment profoundly affecting the rest of the country as well; for that year saw the introduction of free hospitalization and the beginning of changes in the pattern of medical practice in the Union which are by no means yet final or clear, but which are analysed with particular force and clarity in Mr. Lee McGregor's distinguished contribution to the problem published in this issue.

FREE HOSPITALIZATION

With the advent of free hospitalization a valid distinction between hospital and medical services became recognized. The distinction is important, because for the private patient requiring a bed, fees for hospitalization are usually the main item in the cost of medical care. Its free provision was therefore a commendably progressive step which left the private patient better able to meet his other commitments, whether to his insurance company or his doctor. It also preserved for him

REDAKSIONEEL

DIE TRILEMMA VAN DIE MEDIESE PRAKTYK

NA-GRAADSE GELEENTHEDE IN SUID-AFRIKA

Met die mediese professie en die publiek as proefkynne het Transvaal in 1948 'n laboratorium geword waar 'n maatskaplike proef-neming gedoen is, wat voorbestem was om 'n ingrypende uitwerking op die res van die land te hê. In daardie jaar het ons naamlik die geboorte van die vry hospitalisasieskema aanskou. In die bestek en omvang van die geneesheer se praktyk het hierdie skema sekere veranderings aangebring in die Unie wat nog nie volkome gefinaliseer en duidelik afgebaken is nie, maar wat met opvallende krag en duidelikheid ontleed word in mnr. Lee McGregor se uitstekende referaat oor die probleem soos in hierdie uitgawe weergegee.

VRY HOSPITALISASIE

Met die koms van vry hospitalisasie is daar 'n heeltemal geregverdigde lyn tussen hospitaal-dienste en mediese dienste getrek. Hierdie verskil is van belang, want hospitaalgelde is gewoonlik die grootste enkele item in die totale koste van die mediese behandeling van 'n private pasiënt wat 'n bed nodig het. Die gratis beskikbaarstelling daarvan was derhalwe

intact that mainstay of independence and self-respect—the important democratic right to the choice of his own medical practitioner.

With free hospital services went also free medical care for a new social class, viz. those not well able to afford it. The provincial authorities were thus faced with the need to provide a complete service not only for paupers but also (by a most elastic almoning formula) for a new category of non-indigent patients.

From the standpoint of a public authority these services had to be provided as efficiently and economically as possible, with full administrative control over the medical staff concerned. This inevitably meant the complete destruction of the honorary system and its progressive displacement by salaried officers (part-time and full-time) who, for better or for worse, became married to a public service with its inevitable concomitant machinery.

In the platteland the economics of medical practice did not suffer, and the sick were assisted considerably at the very time when they needed assistance most. In the urban areas, particularly Johannesburg, where public hospital accommodation was inadequate to cope with the new and sudden demands, a different trend developed. Despite the Administration's attempts to deal with the situation by hiring beds in private nursing homes, the new class of patient resulted in a greater demand than available buildings and nursing staffs could contend with.

The inevitable reduction in available private nursing home accommodation meant also that private patients had to pay for both hospital and medical services unless they could get a public bed. A diversion of patients to other areas, where free hospitalization could accommodate them, began to take place.

This situation was bound to lead to considerable indignation and dissatisfaction, because practitioners were unfairly being deprived of their practices although they worked in the area contributing the greatest amount by taxation to the public funds which made free hospitalization possible.

Although, in theory, the inequity in the distribution of facilities and opportunities is only temporary, nevertheless both the public and the profession have a genuine and understandable grievance in an important area such as Johannesburg. The clamour is clearly justified that there should be a more even sharing of the current disability throughout the province. It is scant satisfaction for the doctor and his private patient to know that present economic

'n prysenswaardige en vooruitstrewende stap, want dit het die private pasiënt 'n veel beter kans gebied om sy ander verpligtinge—hetsy teenoor sy versekeringsmaatskappy of teenoor sy dokter—na te kom. Dit het ook een van die steunpilare van sy onafhanklikheid en selfrespek—sy belangrike demokratiese reg om sy eie dokter te kies—in stand gehou.

Gratis hospitaaldienste het vergesel gegaan van gratis mediese behandeling vir 'n nuwe maatskaplike klas, nl. diegene wat sodanige behandeling nie maklik kon bekostig nie. Die Provinsie het dus te staan gekom voor die noodsaaklikheid om 'n volledige diens tot beskikking te stel nie alleen van armlastiges nie, maar ook (deur middel van 'n besonder elastiese aalmoeseniensformule) van 'n nuwe groep nie-armlastige pasiënte.

Uit die standpunt van 'n openbare owerheid was dit natuurlik noodsaaklik dat hierdie dienste so doeltreffend en ekonomies moontlik verskaf moes word, en dat hy volle administratiewe beheer oor die mediese personeel moes behou. Onvermydelik het dit die algehele vernietiging van die ere-stelsel meegebring, en laasgenoemde is geleidelik vervang deur 'n stelsel van gesalarieerde amptenare (deelyds of voltyds) wat vir goed of kwaad gehuud geraak het met 'n staatsdiens en al die daarmee gepaard gaande masjinerie.

Op die platteland het die ekonomie van die mediese praktisyn nie juis daaronder gely nie, en waardevolle hulp is aan siekes verleen juis op die tydstip wanneer hulle daardie hulp die nodigste gehad het. In die stedelike gebiede, en veral in Johannesburg waar die openbare hospitaalkommodasie op verre na nie voldoende was om aan die skielike nuwe eise te voldoen nie, is 'n heeltemal ander rigting egter ingeslaan. Ondanks die Administrasie se pogings om die posisie die hoof te bied deur beddens in private verpleeginrigtings te huur, het die eise wat deur die nuwe soort pasiënte gestel was so 'n groot omvang aangeneem dat die beskikbare geboue en verpleegpersonele eenvoudig nie daaraan kon voldoen nie.

Die onvermydelike vermindering van die beskikbare akkommodasie in private verpleeginrigtings het weer meegebring dat private pasiënte vir sowel hospitaal- as mediese behandeling moes betaal, tensy hulle 'n bed in 'n openbare hospitaal kon kry. Weldra het die wegstuur van pasiënte na ander gebiede waar die vry hospitalisasieskema in hul behoeftes kon voorsien, begin plaasvind.

Hierdie toestand moes op die lange duur aanleiding tot heelwat verontwaardiging en ontevredenheid gee, want, ondanks die feit

hardship may at some remote time in the future be redressed (without any compensation). Incidentally, the situation emphasizes the prematurity with which the Free Hospitals Ordinance was implemented.

THE MEDICAL SCHOOLS

Other features also developed in the urban areas, especially in the university centres. Unlike the Provincial Administration, the Medical Schools had a primary educational interest in the hospital as a teaching centre for undergraduate as well as post-graduate training. They were not concerned to the same extent with the Administration's need to provide a free and cheap medical service. But the partnership that suggested itself between the Province and the University was obvious. It was a mutually economical arrangement for both parties to the agreement. The Administration gained a complete medical personnel (by staffing the hospitals concerned on the basis of joint appointments, with the final decision in the hands of the Administration) and the Universities were provided with a guaranteed supply of teaching material which would enable them the better to cope with the growing and insistent demands for post-graduate training.

The destruction of the honorary system, which had worked with such distinction for so many generations, had its academic repercussions as well. Teaching units expanded and became staffed with as many full-time appointments as possible. This led to a progressive diminution in the opportunities for academic association for the incumbents of part-time appointments (who often included the most senior practitioners in the community, and who must feel increasingly frustrated in a situation which at present can only follow a worsening trend).

THE MEDICAL COUNCIL

The increase in full-time appointments was a development almost dictated as a necessity by the third factor in the situation—the requirements of the Medical Council for specialist registration.

In this country we have adequate resources for post-graduate instruction; but those seeking registration as specialists must comply with certain requirements laid down by the Medical Council for statutory recognition of their post-graduate skills. The demands for specialist registration include, *inter alia*, training in a

dat mediese praktisyns gewerk het in dié streek wat die meeste belastinge betaal en daardeur juis die vry hospitalisasieskema moontlik gemaak het, is hulle deur hierdie einste skema op 'n baie onbillike wyse van hul praktyk beroof.

Hoewel die onregverdigde verspreiding van fasiliteite en geleenthede teoreties slegs 'n tydelike verskynsel was, het sowel die publiek as die mediese beroep in 'n belangrike stad soos Johannesburg 'n egte en 'n heeltemal begryplike grief. Die eis dat daar 'n billiker verdeling van die bestaande gebreke dwarsdeur die Provinsie moes wees, was klaarblyklik geregtig. Dit is 'n skrale troos vir die dokter en sy pasiënt om te verneem dat die bestaande ekonomiese ontberinge op die een of ander tydstop in die verre toekoms uit die weg geruim sou word (sonder enige vergoeding). Tussen hakies, die posisie het die voorbarigheid waarmee die Vry Hospitaal-ordonnansie in werking gestel is, baie duidelik aan die lig gebring.

DIE MEDIESE SKOLE

Ander simptome het hulle ook in die stedelike gebiede, en veral in die universiteitsentrums, begin openbaar. Anders as in die geval van die provinsiale administrasie het die mediese skole 'n primêr opvoedkundige belang in die hospitaal, as opleidingsplek vir ongegradeerde sowel as na-graadse studente. Die mediese skole as sodanig is nie betrokke by die Administrasie se pogings om gratis en goedkoop mediese dienste beskikbaar te stel nie. Maar dit het voor die hand gelê dat die Provinsie en die universiteite 'n vennootskap moes aangaan, want so 'n reëling sou tot onderlinge ekonomiese voordeel van albei partye tot die ooreenkomste wees. Die administrasie het 'n volledige mediese personeel verkry (deur die betrokke hospitale van staf te voorsien op die grondslag van gesamentlike aanstellings, maar met die finale beslissing altyd in die hande van die administrasie), terwyl die universiteite, weer, kon staatmaak op 'n gewaarborgde aantal leerkragte wat hulle in staat sou stel om op 'n veel doeltreffender wyse te voldoen aan die toenemende en dringende aanvraag om na-graadse opleiding.

Die uitskakeling van die ere-stelsel—'n stelsel wat oor so vele generasies so uitstekend gewerk het—het ook akademiese nagevolge gehad. Onderriggenhede het uitgebrei, en voltydse aanstellings was aan die orde van die dag. Dit, weer, het aanleiding gegee tot 'n geleidelike vermindering van die

teaching hospital in an approved full-time post as well as a registrable higher qualification. The universities therefore inevitably became sucked into the business of providing masses of diplomas and degrees as well as full-time posts acceptable for specialist registration.

Whether a University should forsake its true function, which is scholarship and the pursuit of knowledge for its own sake, and turn its Medical School into a technological apparatus for grinding out certificates of clinical competence, is a highly debatable proposition. Certainly, Dr. T. B. Davie, Principal of the oldest University in the country, spoke out in no uncertain terms against such a perversion of the academic role when he delivered his Presidential Address to the Cape Town Post-Graduate Medical Association in 1949.¹ He was prepared to justify university participation in such a programme only on the grounds of expediency. Clearly no other professional body could contend with the problem at the time.

Willy-nilly the Medical Schools became embroiled in the scheme, and there was ready acquiescence all round in the creation of more and more full-time posts to accommodate those clamouring to satisfy the Medical Council's requirements. However, the number of such posts was obviously limited by what the Provincial Administration was prepared (and permitted by law) to pay for, since it is not the function of the Administration to subsidize higher education. The net result was the creation of a queue for these posts, since demand exceeded supply; and in this queue only those who could afford it could take their turn to wait. Queues even began to form at non-teaching hospitals (where aspirants could mark time and get a 50% credit—up to a maximum of one year—for their work towards specialist registration).

POST-GRADUATE ADVANCEMENT

Those charged with the unenviable task of deciding hospital appointments could only be embarrassed by the sudden and undesirable power, responsibility and authority placed in their hands.

The young graduate who does not go into general practice, but clings to the Medical School from which he graduated, increases the chances of his progress in the academic hierarchy; whereas his contemporary who goes into the field of practice outside the hospital,

geleenthede vir akademiese assosiasie deur die bekleërs van deeltydse betrekkings—en onder laasgenoemde is daar van die mees senior mediese praktisyns in die gemeenskap. Geen wonder nie dat hulle 'n toenemende gevoel van dwarsboming moes ondervind in 'n toestand wat alleen kan vererger.

DIE MEDIESE RAAD

Die toename in die aantal voltydse aanstellings was 'n ontwikkeling wat byna onvermydelik voortgevoel het uit 'n derde faktor wat op die toestand ingewerk het, naamlik die vereistes van die Mediese Raad waaraan voldoen moes word voordat 'n spesialis hom kon laat registreer.

In hierdie land het ons doeltreffende fasiliteite vir na-graadse instruksie; maar diegene wat hulle as spesialiste wil laat registreer, moet voldoen aan sekere vereistes, neergelê deur die Mediese Raad, voordat hul na-graadse bekwaamheid statutêr erken word. So sluit die vereistes vir erkenning as 'n spesialis onder meer in opleiding aan 'n onderrighospitaal in 'n goedgekeurde voltydse betrekking, sowel as 'n registreerbare hoër kwalifikasie. Gevolglik was dit onvermydelik dat die universiteite betrokke sou raak by die gedoente verbonde aan die uitreiking van massas diplomas en grade, en die beskikbaarstelling van voltydse betrekkings wat aanneemlik vir spesialiste-registrasie sou wees.

Of 'n universiteit van sy ware funksie, nl. geleerdheid en die nastrewing van kennis terwille van daardie kennis, moet afsien, en sy mediese skool moet omskep in 'n tegnologiese inrigting vir die uitkoom van sertifikate van kliniese bevoegdheid, is natuurlik 'n hoogs betwisbare saak. Een ding is seker. Dr. T. B. Davie, hoof van die oudste universiteit in die land, het baie sterk te velde getrek teen enige sodanige verdraaiing van die universiteit se rol toe hy in 1949 sy voortsittersrede voor die Kaapstadse Na-graadse Mediese Vereniging gelewer het.¹ Hy sou die deelname van 'n universiteit aan so 'n program slegs as 'n noodhulp wou regverdig. Dit was duidelik dat geen ander professionele liggaam toentertyd die probleem die hoof kon bied nie.

Teen wil en dank het die mediese skole gevolglik in die skema verwickel geraak, en aan alle kante was daar 'n bereidwillige berusting by die skepping van meer en steeds meer voltydse betrekkings vir diegene wat luidkeels daarop aangedring het dat hulle 'n geleentheid

1. Davie, T. B. (1949): S. Afr. Med. J., 23, 675.

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finds that after a few years he has lost his place in the queue. The passage of time only increases his disability. A professional career could be made or marred by circumstances unrelated to the merits or ability of an applicant. Moreover, the pattern of post-graduate education now tends to stock the staff in teaching hospitals with practitioners who are among the most junior in the profession, able as they undoubtedly are. This cannot be in the best interests either of the patients or the teaching units themselves. For there is an abundance of knowledge that examination craft cannot provide, viz. the intellectual wealth that only experience can accumulate—*experientia docet*.

As a corollary to this system, the specialists as a class are increasingly comprised of the young—again a feature which militates against the conception that their status should go with maturity and experience, qualities that the rules for specialist registration do not ensure.

In a situation in which appointments depend on the joint approval of a provincial authority and a university department, circumstances might conceivably arise in which influence by a party-political machine or academic nepotism could influence admission or advancement—a twin mode of progress utterly inimical to the best traditions of scholarship and clinical skill. Those who cherish equity in these matters would find it unthinkable that the just test of merit could possibly be imperilled in the selection of candidates suitable for clinical appointments.

The process at work to accommodate the trainee specialist has also led to the virtual exclusion of the practitioner who is not in the slightest concerned with the requirements for specialist registration, but who is very much concerned to have a post-graduate association with a hospital which is essential for inspiration, stimulus and the opportunity of maintaining and improving his clinical standards. That the portals of the halls of learning should contract to admit only the fortunate or the favoured few is neither in the public nor the professional interest. For the standards of medical practice in a community (whether in the specialist or the general field) depend on much more than the obviously necessary provision of facilities for trainee specialists.

THE ROLE OF THE HOSPITAL IN MEDICAL PRACTICE

Those who have made a study of the requirements of medical training and practice have

gebied moes word om aan die Mediese Raad se vereistes te voldoen. Maar die aantal sodanige betrekkings was klaarblyklik beperk deur wat die Provinsiale administrasie bereid, en, kragtens wet, toegelaat was om te betaal, want dit is beslis nie die funksie van die Administrasie om hoër onderwys te subsidieer nie. Die netto-resultaat was 'n toestanery om hierdie soort betrekkings, want die aanvraag was veel groter as die aanbod. En in hierdie tou kon slegs diegene 'n plek inneem wat dit kon bekostig om lank en geduldig te wag. Toue het selfs begin staan by hospitale wat geen voorsiening vir onderrig maak nie, maar waar die aspirant die pas kon markeer en 'n 50 persent-krediet kon kry—tot 'n maksimum van een jaar—vir die werk wat nodig was om as spesialis geregistreer te word.

NA-GRAADSE BEVORDERING

Diegene wat belas was met die onbenydenswaardige taak om oor hospitaalaanstellings te besluit, is erg in die verleentheid gebring deur die skielike en onwenslike bevoegdheid, verantwoordelikheid en mag wat in hul hande geplaas is.

Die jong gegradueerde wat nie 'n algemene praktisyn word nie, maar vaskleef aan die mediese skool waar hy gegradueer het, verhoog sy kans op bevordering in die akademiese hiërargie; sy tydgenoot, daarenteen, wat buite die hospitaal begin praktiseer, ontdek na 'n jaar of wat dat hy sy plek in die tou verloor het. Met verloop van tyd trek hy al hoe meer aan die kortste ent. 'n Professionele loopbaan kan dus bestendig of bederf word deur omstandighede wat hoegenaamd niks met die verdienste of bekwaamheid van die betrokke persoon te make het nie. Temeer, die patroon van na-graadse opleiding is tans geneig om onderrighospitale te vul met mediese praktisyns wat onder die jongstes in die professie ressorteer, hoe bekwaam hulle ook al mag wees, en dit kan nie in die beste belange of van die pasiënt of van die betrokke onderriggenheid wees nie. Want daar is velerlei soorte van kennis wat nooit deur eksamenbehendigheid verskaf kan word nie. Ons dink hier veral aan die intellektuele skatte wat slegs uit ondervinding kan voortspruit. *Experientia docet*.

Ten gevolge van hierdie stelsel is ons spesialiste, as 'n klas, in 'n steeds toenemende mate uit jong manne saamgestel—'n verdere weerspreking, dus, van die idee dat 'n spesialis se status onder meer gegrond moet wees op ryphed en ondervinding—hoedanighede waar-

long recognized that '...without a hospital connexion a physician of ordinary talents cannot mentally thrive . . . it is the duty of physicians to seek hospital connexions and . . . it is equally the duty of those who control hospitals to facilitate such connexions. If anything can be done to liberalize the closed hospital without destroying its efficiency as a teaching and research centre, it should be done . . . the need of a hospital connexion for every practising physician should be the controlling factor in all community hospital organizations'.²

What, then, has been the impact of the system which has recently evolved in the Union, on medical practice within its borders?

It is an undeniable consequence that more and more practitioners are maintaining less and less contact with the public hospital—whether this is a teaching centre or not. General practitioners as well as specialists are being elbowed out of even part-time appointments and, where this has not yet happened, the writing is on the wall for those who care to look. A clinical service for a maximum of patients in public hospitals is being provided increasingly by a minimum of practitioners (with, of course, the exception of the posts for trainee specialists, who are among our most junior colleagues). The bulk of the profession is being cut off from access to the public hospitals.

This is a disastrous tendency which can only undermine the whole structure of medical practice and the standards of medical care. For no doctor's training ceases with his admission to a statutory register of practitioners. No single practitioner can hope to see in his own necessarily limited private practice the wealth of clinical material (and its associated diagnostic and therapeutic problems) that comes the way of the public hospital. The maintenance of his standards of clinical knowledge makes a hospital association a *sine qua non* for the conscientious practitioner.

For it is not enough to read about medical cases in books. The successful study and practice of medicine requires more than the taking of thought about the matter. It needs the actual laying on of hands. Participation in the work of the hospital provides not only clinical opportunities but also discussion with colleagues, the exchange of information, experience and advice and a professional camaraderie between colleagues which can

op daar nie aangedring word in die reëls vir die registrasie van spesialiste nie.

Waar aanstellings afhanklik is van die gesamentlike goedkeuring van 'n Provinsiale bestuur en 'n universiteitsdepartement is dit denkbaar dat omstandighede moontlik kan ontstaan, waar die partypolitieke masjien of akademiese nepotisme invloed kan begin uitoefen op toelating of bevordering—die tweeling-manier van vooruitgang wat geheel en al in stryd is met die beste tradisies van geleerdheid en kliniese bekwaamheid. Diegene wat aandrang op billikheid in sulke sake, is dan ook erg onthuts oor die moontlikheid dat die heeltemal geregverdigde verdienste-toets veronagsaam kan word by die keuse van geskikte applikante vir kliniese aanstellings.

Die prosesse wat in die werk gestel is om die aspirant-spesialis te akkommodeer, het ook aanleiding gegee tot die feitlik algehele uitskakeling van die mediese praktisyne wat hom geensins besorg maak oor die vereistes vir registrasie as spesialis nie, maar darem sterk na 'n nagraadse assosiasie met 'n hospitaal verlang omdat so 'n assosiasie hom besiel, as 'n spoor-slag vir hom dien, en hom 'n geleentheid bied vir die instandhouding en uitbreiding van sy kliniese kennis. Dat die poorte van die sale van geleerdheid so nou gemaak moet word dat slegs die gelukkige of die begunstigde minderheid daardeur kan ingaan, is in belang nóg van die publiek nóg van die mediese professie. Want die peil van die mediese praktyk in 'n gemeenskap (of dit nou al op gespesialiseerde of algemene gebied is) is afhanklik van veel meer as die klaarblyklik noodsaaklike beskikbaarstelling van fasiliteite vir aspirant-spesialiste.

DIE ROL VAN DIE HOSPITAAL IN DIE MEDIESE PRAKTYK

Diegene wat 'n studie gemaak het van die vereistes vir die mediese praktyk en mediese opleiding het lank reeds tot die gevolgtrekking gekom dat, sonder 'n hospitaalkonnekksie, die geneesheer van gemiddelde bekwaamheid nie geestelik vooruit kan gaan nie, dat dit die plig van die geneesheer is om so 'n konnekksie te vind, en dat dit eweseer die plig is van diegene wat hospitale beheer, om sodanige konnekksies moontlik te maak. As enigiets gedoen kan word om die „geslote” hospitaal vrysinning te maak sonder om sy doeltreffendheid as onderrig- en navorsingsentrum te ondermyn, behoort dit nie nagelaat te word nie. Die noodsaaklikheid van 'n hospitaalkonnekksie vir iedere praktiserende geneesheer

2. Goldwater, S. S. (1925): J. Amer. Med. Assoc., 84, 933.

only enhance the practice of medicine in the community concerned. In the view of students of the problem, 'the number of men that can be comfortably tucked in under the blanket of a hospital staff organization is truly astonishing . . . the key to nearly everything that makes for efficient medical practice is in the hands of the hospitals. Their duty is plain—they must open wide the doors of opportunity, so that the entire medical profession may enter in, for the fruits of medical progress belong of right to the many, not to the few'.²

It is against this background that we must examine the political accident which has placed the hospitals in the hands of a Provincial authority. The Administration must not only care for the sick in its hospital wards. It has a moral duty to make the professional facilities inseparably associated with its hospitals available to the greatest number, in order to ensure that the standards of medical practice are not assailed. It can only be regarded as the custodian of a public service which owes obligations greatly exceeding the immediate need to care for the sick. Indeed, in making joint appointments with the universities to the staffs of the teaching hospitals, it has already recognized this obligation. It is our contention that this obligation is far more extensive, since it is a public duty to counter the forces operating to produce the present 'parlous state of the family physician...'.² We must be mindful also 'of the strong and ever stronger disinclination of medical graduates to lead lives of professional isolation . . . the open hospital . . . brings into touch with an organized medical institution many physicians who, under a more restricted or exclusive hospital system, would be deprived of those helpful and stimulating contacts, without which they are in danger of deteriorating in medical knowledge and proficiency from the moment of graduation from medical school'.²

THE REACTION OF THE PROFESSION

The poverty of public clinical opportunity and its attendant evils is reflected in the vigorous way in which the medical profession has reacted to the situation. The threat to their status and to the standards of general practice has forced the general practitioners to organize a group on a national scale. With remarkable unanimity our colleagues (of both general and specialist status) have joined forces to create a South African College of Physicians and Surgeons, which will concern itself with post-graduate teaching as well as examination. All

moet die deurslaggewende faktor in al die hospitaalorganisasies in 'n gemeenskap wees.²

Watter uitwerking het die stelsel wat vandag in die Unie toegepas word, dan op mediese praktisyns binne ons landsgrense gehad?

Een van die onweerlegbare gevolge was dat meer en steeds meer geneeshere hul kontak met die openbare hospitale verloor het—of sodanige hospitale nou al onderrigsentrums is al dan nie. Algemene praktisyns sowel as spesialiste word uit die pad gestamp as dit by aanstellings—selfs deelydse aanstellings—kom, en waar dit nog nie gebeur het nie, is die handskrif reeds duidelik leesbaar teen die muur vir almal wat oë het om te sien. Kliniese dienste aan 'n maksimum-aantal pasiënte in openbare hospitale word in 'n steeds toeneemende mate verskaf deur 'n minimum-aantal mediese praktisyns (met uitsondering, natuurlik, van die betrekkings vir aspirant-spesialiste, onder wie daar sommige van ons allerjongste kollegas is). Die oorgrote meerderheid van ons geneeshere kry geen toegang tot ons openbare hospitale nie.

Dit is 'n ramspoedige neiging wat slegs een gevolg kan hê, nl. die ondermyning van die hele wese van die mediese praktyk en die gehalte van mediese behandeling. Want geen dokter se opleiding kom tot 'n einde op die dag dat sy naam in die statutêre register van mediese praktisyns opgeneem word nie. Geen enkele geneesheer kan hoop dat sy eie noodwendig beperkte private praktyk ooit al die magdom van kliniese materiaal en die daarmee gepaard gaande diagnose- en terapeutiese probleme sal oplewer wat deur 'n algemene hospitaal verskaf kan word nie. Die instandhouding van die pligsgetroue geneesheer se peil van kliniese kennis maak 'n hospitaal-konneksie 'n *sine qua non*.

Want dit is nie voldoende om net van mediese gevalle in boeke te lees nie. Die geslaagde bestudering en beoefening van die geneeskunde vereis veel meer as blote nadenke oor 'n saak. Dit vereis die werklike oplegging van hande. Deelname aan die werk in 'n hospitaal bied nie alleen kliniese geleenthede nie, maar ook geleenthede vir samesprekings en die wisseling van inligting, ondervinding en advies; en dit skep 'n professionele kameraderie tussen kollegas wat alleen 'n goeie gevolg kan hê, naamlik die verhoging van die algemene peil van die geneeskunde in die betrokke gemeenskap. Persone wat die

2. Goldwater, S. S. (1925): J. Amer. Med. Assoc., 84, 933.

these events are but the outward portents of a determination to see that adequate opportunities are provided for gaining medical knowledge and its recognition outside the constricting confines at present imposed by the Medical Council and by the Universities.

We are the witnesses of a professional protest reminiscent of an earlier historic revolt which took place in analogous circumstances against the academic monopoly of the universities and the churches in the 16th century, and which led to the establishment of the Royal Colleges in England and in Scotland.

We are contemporary with an articulate objection to the complete distortion of the pattern of medical practice in our times and a determination to see a proper balance restored.

EPIDEMIC FOLLICULAR KERATOSIS

Elsewhere in this issue Craig Cochrane and Loewenthal report for the first time in the Union observations on an outbreak of epidemic follicular keratosis, a disease with an exanthem as a striking feature. The virus nature of the condition is as yet presumptive.

The cases were, for obvious reasons, confined to the Transvaal, but the report should alert practitioners throughout the rest of the country, especially since Rudolph records in a supplementary paper* the interesting fact that it has occurred in Africans.

It is likely that the Transvaal epidemic is related to the similar outbreak in England in 1952 and it may be related etiologically to the Swiss cases reported in 1947.

Recognition and precise diagnosis are important for several reasons:

1. At certain stages the condition may be confused with a nutritional deficiency state.

2. It has undoubtedly been misdiagnosed as varicella and rubella. The latter is an important source of error especially in early pregnancy. It is not known whether the hypothetical virus of epidemic follicular keratosis will (like that of rubella) produce foetal abnormalities and so add to the possible medical reasons for terminating pregnancy. But the observations of these authors emphasize the importance of further research.

3. Unless there is a proper appreciation of the nature of this exanthem, children may be placed in unnecessary quarantine and have their schooling disturbed without good cause.

* To be published in the next issue of this Journal.—Editor.

probleem bestudeer het, het tot die volgende slotsom geraak: „Die aantal manne wat lekker gerieflik onder die kometers van 'n hospitaal-personeelorganisasie ingestop kan word, is werklik verbasend . . . die sleutel tot byna alles wat doeltreffende mediese behandeling in die hand werk, is aan die hospitale toevertrou. Hul plig lê voor die hand. Hulle moet die deure van geleentheid wyd oopstel sodat die hele mediese professie kan binnekom, want die vrugte van mediese vooruitgang behoort aan die menigte, nie aan die enkele nie.”²

Dit is teen hierdie agtergrond dat die politieke ongeluk wat die hospitale in die hande van 'n Provinsiale owerheid geplaas het, betrag moet word. Die Administrasie moet nie alleen sorg vir die pasiënte in die siekesale van sy hospitale nie. Daar rus 'n morele verpligting op hom om die professionele fasiliteite wat onafskeidelik aan sy hospitale verbode is, tot beskikking van die grootste aantal te stel, en om hierdeur te verseker dat die peil van mediese behandeling nie ondermyn word nie. Die Provinsie kan beskou word as die opsigter oor 'n openbare diens wat veel groter verpligtinge meebring as die onmiddellike noodsaaklikheid om vir siektes te sorg. Trouens, deur aanstellings saam met die universiteite in die personeel van onder-righospitale te doen, het die Provinsie reeds daardie verpligtinge erken. Ons gaan van die standpunt uit dat hierdie verpligtinge in werklikheid veel omvattender is, want dit het 'n openbare plig geword om die kragte wat hierdie „gevaarlike posisie van die gesinsgeneesheer”² veroorsaak, te bestry. Ons moet ook gedagtig bly aan die sterk en steeds sterker wordende teësin van die mediese graduate om 'n lewe van professionele isolasie te lei, en die feit dat die „oop” hospitaal talle geneeshere in aanraking met 'n georganiseerde mediese inrigting bring. Onder 'n beperkter of meer eksklusiewe hospitaalstelsel sou hierdie geneeshere sonder hierdie hulpvaardige en stimulerende kontakte moet klaarkom. En, as dit gebeur, sal hulle in die gevaar verkeer dat hul mediese kennis en bekwaamheid agteruit sal begin gaan vanaf die oomblik dat hulle die mediese skool verlaat.²

DIE REAKSIE VAN DIE PROFESSIE

Die tekort aan geleentheid vir openbare kliniese werk en die euwels wat dit meegebring het, blyk baie duidelik uit die kragtige wyse waarop die mediese professie op die huidige toestand gereageer het. Die bedreiging wat dit inhou vir hul status en die peil van

Although the course of the illness (as observed so far) suggests that energetic measures are probably not necessary for the average case, further studies (laboratory and clinical) may throw considerable light on the causal organism and so influence our attitude towards treatment of the graver varieties which, sooner or later, may be encountered.

PUBLICATION OF PAPERS

Medical practitioners are invited to submit for publication in this journal case reports, original clinical observations, research and such other contributions as will reflect current trends and contribute to the advancement of the practice of medicine.

The Editor will be glad to advise and assist authors with the preparation of their material.

Although publication of a paper in this Journal formally vests its copyright in the Editor, authors are assured that they will be given every assistance in connexion with such use as they may wish to make of their papers for medical, scientific or educational purposes.

QUESTIONS FOR ANSWER

A Question and Answer Department has been established to deal with actual problems arising in clinical practice.

Queries should be addressed to the Editor at P.O. Box 1010, Johannesburg.

SUPPLY OF REPRINTS

Special arrangements have been made with the printers to supply authors with reprints at cost. A schedule of charges is published elsewhere in this issue.

NOTES AND NEWS • BERIGTE

WESTDENE PRODUCTS' SCHOLARSHIP FOR MEDICAL STUDENTS

Mr. B. T. Naidoo, a fourth-year Medical Student, has been awarded the Westdene Products' Scholarship of 1955 for the Natal University.

Dr. Robert Wolff of Cape Town recently passed the primary Fellowship examination of the Royal College of Surgeons. He is the oldest man in the world ever to have succeeded in doing so.

Dr. Lucie van Dam of 43 Mill Park Road, Port Elizabeth (telephone 6-9006), has resumed her practice after a prolonged illness.

hul algemene mediese werk het het algemene praktisyns gedwing om hulle op 'n landswyse skaal saam te skaar in 'n georganiseerde groep. Met merkwaardige eensgesindheid het ons kollegas (sowel algemene praktisyns as spesialiste) saamgespan en 'n Suid-Afrikaanse Kollege van Geneeshere en Chirurge gestig wat hom op sowel na-graadse onderrig as eksamens toelê. Al hierdie dinge is maar net die uiterlike tekens van 'n onwrikbare vasberadenheid om daarvoor te sorg dat voldoende geleenthede vir die verwerwing en erkenning van mediese kennis geskep word buite die enge grense wat deur die Mediese Raad en die universiteite neergelê is.

Ons aanskou vandag 'n professionele protes wat 'n opvallende ooreenkoms vertoon met die geskiedkundige opstand wat in die 16de eeu in dergelike omstandighede plaasgevind het teen die akademiese monopolie van die universiteite en die kerke, en aanleiding gegee het tot die stigting van die Koninklike Kolleges in Engeland en Skotland.

Ons lewe in 'n tyd van sprekende protes teen die algehele verwringing en verdraaiing van die patroon van die mediese praktyk, en van vasberadenheid om die ewewig te herstel.

EPIDEMIESE FOLLIKULÊRE KERATOSE

Elders in hierdie uitgawe verskyn daar 'n verslag deur Craig Cochrane en Loewenthal oor die eerste waarnemings in die Unie van die uitbreek van epidemiese follikulêre keratose, 'n siekte wat deur 'n opvallende uitslag gekenmerk word. Of die toestand deur 'n virus veroorsaak word, is nog nie seker nie, maar vermoedelik is dit die geval.

Die waargenome gevalle was om klaarblyklike redes tot Transvaal beperk, maar die verslag dui daarop dat praktisyns in ander dele van die land op hul hoede behoort te wees, veral aangesien Rudolph in 'n aanvullende referaat* melding maak van die interessante feit dat die siekte ook onder natuurlike voor-gekom het.

Dit is waarskynlik dat die Transvaalse epidemie in verband staan met 'n dergelike epidemie wat in 1952 in Engeland uitgebreek het, en daar kan ook 'n etiologiese verband wees met die Switserse gevalle wat in 1947 aangemeld is.

Om etlike redes is herkenning en akkurate diagnose van groot belang.

1. Op sekere stadiums kan die toestand met voedingsgebreksiektes verwar word.

* Wat in die volgende uitgawe van hierdie Tydskrif verskyn.—Redakteur.

Dr. Ronald L. Amoils has begun practice as a Physician at 801 Medical Centre, Jeppe Street, Johannesburg (Telephones: Residence: 44-1948; Rooms: 23-6811).

THE WISDOM OF HIPPOCRATES

Fat people who want to reduce should take their exercise on an empty stomach and sit down to their food out of breath. They should not wait to recover their breath. They should before eating drink some diluted wine, not too cold, and their meat should be dished up with sesame seeds or seasoning and such-like things. The meat should also be fat as the smallest quantity of this is filling. They should take only one meal a day, go without baths, sleep on hard beds and walk about with as little clothing as maybe. Thin people who want to get fat should do exactly the opposite and never take exercise on an empty stomach.

* * *

A pregnant woman is of good complexion if the child be male; of ill complexion if the child be female.

* * *

A male foetus inclines to the right, a female to the left.

* * *

Those who are bald do not suffer from varicose veins, while should someone who is bald develop such veins, then his hair grows again.

* * *

It is better not to treat those who have internal cancers since, if treated, they die quickly; but if not treated they last a long time.

* * *

Sneezing supervening on an attack of hiccoughs relieves that condition.

(From *The Medical Works of Hippocrates*, translated by J. Chadwick and W. N. Mann. Oxford: Blackwell Scientific Publications.)

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The extra charge for reprints on art paper is about 5%.

2. Sonder die minste twyfel is dit reeds verkeerd gediagnoseer as varicella en rubella. Laasgenoemde is 'n belangrike bron van vergissing, veral tydens die vroeë stadiums van swangerskap. Dit is nie bekend of die hipotetiese virus van epidemiese follikulêre keratose (soos dié van rubella) fetus-abnormaliteite tot gevolg het, en dus die moontlike mediese redes vir die beëindiging van swangerskap kan vermeerder nie. Maar die waarnemings van hierdie skrywers benadruk die belangrikheid van verdere navorsing.

3. Tensy daar 'n behoorlike waardering van die aard van hierdie uitslag is, kan kinders onnodig onder kwarantyn geplaas word, met die gevolg dat hul skoolwerk sonder voldoende rede onderbreek word.

Hoewel die verloop van die siekte (soos tot dusver waargeneem) die vermoede wêreld dat energieke maatreëls in die gemiddelde geval waarskynlik nie nodig is nie, kan verdere laboratorium- en kliniese studies heelwat lig op die kasuele organisme werp, en gevolglik invloed uitoefen op ons houding teenoor die ernstiger soorte wat ons vroeër of later kan teëkom.

PUBLIKASIE VAN REFERATE

Mediese praktisyns word uitgenooi om verslae oor gevalle, oorspronklike kliniese waarnemings, navorsingsverslae en enige ander bydraes wat huidige neigings weerspieël en iets tot die bevordering van die mediese praktyk kan bydra, vir publikasie aan hierdie tydskrif voor te lê.

Die Redakteur sal skrywers met genoeg raad en hulp gee vir sover dit die voorbereiding van hul materiaal betref.

Hoewel die kopiereg op referate wat in hierdie Tydskrif gepubliseer word, formeel by die Redakteur berus, word skrywers verseker dat hulle alle moontlike hulp sal ontvang as hulle hul referate vir mediese, wetenskaplike of opvoedkundige doeleindes wil gebruik.

VRAE VIR BEANTWOORDING

'n Rubriek vir vrae en antwoorde is ingestel vir die bespreking van die probleme wat in die loop van 'n geneesheer se kliniese praktyk kan ontstaan.

Navrae moet gerig word aan die Redakteur, Posbus 1010, Johannesburg.

AFDRUKKE

Spesiale reëlins is met die drukkers getref om skrywers van afdrucke teen kosprys te voorsien. 'n Pryslus verskyn langsaan.

THE CHANGING SCENE IN HOSPITAL

A. LEE MCGREGOR, CH.M., F.R.C.S.*

Johannesburg

I returned to South Africa in 1920, having graduated from Edinburgh. I was appointed house surgeon at the Johannesburg General Hospital and have maintained my association with that institution ever since. The time period included is over a third of a century. Many views with increasing concern the changes of policy in the conduct of our hospitals and the trend of events, the pattern of which is becoming evident, is causing alarm to those who have an interest in the improvement of our hospitals and the care of the sick poor.

As a practising surgeon I shall deal mainly with the surgical implications of this revolution, but what applies to surgery fits in *pari passu* with happenings in other departments in the Hospital. When I began my association with the General Hospital in the old buildings specialism was in its infancy and surgery for the most part was carried out by general practitioners whose field was vast and included the whole range of general surgery. Ritchie Thompson, John van Niekerk, George Murray, Daly, Rogers and Temple Mursell, were the big names in the surgical field. The nursing staff was superb and the standard of nursing of those days has never been equalled.

The affairs of the Hospital were controlled by the Johannesburg Hospital Board and the honorary system determined medical staffing.

The honorary system was based on that in use in Great Britain where most South African doctors had received their training. It was the ambition of every would-be surgeon to 'get on to the staff' of the General. Selection was made by the Hospital Board and that function was jealously guarded and fairly executed. The object of the Board was to have on its staff the best medical brains available and the result was that the cream of the experience and ability of the entire local profession constituted the staff of the Johannesburg General, which was almost entirely part-time.

From the aspect of the standard of work done the system worked splendidly and there

can be no question whatsoever but that the sick poor received the very best medical attention the country had to offer. The one weakness of this system was the lack of a full-time co-ordinating medical officer of status senior to the houseman.

I am of the opinion that the retention of the honorary system of staffing together with the appointment of full-time registrars would have resulted in the very best way of staffing the General.

From the sociological aspect the honorary system was ideal. The junior respected the senior, imitated his methods and strove for his good opinion. The senior taught and encouraged his assistants. The atmosphere of the hospital was a happy one pervaded by a healthy competition and a strong sense of duty and loyalty to patients and colleagues.

When the hospitals of the Transvaal became a pawn in the political arena, the honorary system was replaced by the Provincial one, and became part of the public service. The farce of 'free hospitalization' was introduced. The honorary system went by the board, the Provincial Council took over the conduct of the hospitals and the medical staff became paid servants of the Province, i.e. public servants. The distinction of being members of the honorary system was lost and, in the case of part-time members of the staff, the remuneration was purely nominal. The effects of these changes in hospital circles were immense both economically and socially.

ECONOMIC EFFECTS OF FREE
HOSPITALIZATION

When the new system came into operation a chaotic position immediately ensued of which the medical profession had warned the Province. There was little or no accommodation in hospital for the free services to which all citizens of the Province were entitled and for which they paid taxes. Beds were engaged in Nursing Homes in great numbers, medicines, etc. were supplied, until very soon the costs became prohibitive and these services were discontinued. There were no hospital beds available except for the poor.

Whilst I was writing this article 2 state-

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ments appeared in the Johannesburg press bearing directly on the matter:

(a) Under the head-line of 'Only 60 Beds for Private Patients in City Hospital', the *Sunday Times* of 1 May 1955 reported:

'Complaints by Johannesburg doctors that only 60 beds at the Johannesburg General Hospital were available for private patients were confirmed by an official of the hospital yesterday.'

These 60 beds apply to the General Hospital and its branches such as the Transvaal Memorial Hospital for Children and the Queen Victoria.

(b) Under the head-line 'Hospital Complaint': 'Room for Only Three Private Patients in the City', *The Star* of 30 April 1955 reported: Throughout March not a single general practitioner could obtain a bed for a private patient in the Johannesburg group of hospitals, Dr. E. L. Fisher told the Johannesburg Hospital Board yesterday afternoon.

Promises had been made in the Provincial Council that Johannesburg would be granted a minimum of 65 beds for private patients—that is, patients who wanted their own doctors. But there were only three beds for private patients, and in March these were used exclusively by specialists, whose patients could presumably afford nursing home fees if they could afford specialists' fees.

'At the most we can have only three beds daily for private patients for a European population of a quarter of a million.'

Mr. D. H. Epstein said it was an alarming state of affairs.

'To make matters worse, we have had a categorical statement from the Provincial authorities that they will not allow us to hire more beds in private nursing homes.'

We must call public attention to the way the public of Johannesburg are being treated. Until we get beds for private patients we must shout from the housetops that Johannesburg suffers a great disadvantage under the free hospital scheme, compared with the rest of the Transvaal.'

Elsewhere, however, the new system worked better and hospital beds, nursing services, etc. were in many cases more than adequate. Such facilities were in free supply in Pretoria and elsewhere and specialists in Johannesburg have been chagrined to find that they are losing a large percentage of their patients who naturally enough find it cheaper to be attended to in towns where free hospitalization is a fact and not a fiction.

SERVICES TO THE PATIENT

Doctors' salaries are in all cases inadequate and the terms of employment offer little prospect for the future. To the part-time medical employee this may be of little moment, but to the full-timer its import is immense. The result is that more often than not that as soon as the hospital has served the purpose of inculcating a basic training, young physicians, surgeons, radiologists, etc. desert the Institution and enter private practice. Many of the most

outstanding of these men would rather continue to work in hospital if they could face the financial future with any degree of equanimity. It is not difficult to understand how this continuous coming and going adds to the feeling of frustration which pervades the hospital. True, such Institutions are intended as training centres, but a nucleus of highly experienced capable officers is necessary to supply this training and to direct treatment. Try to imagine how the head of a department must feel. He carries an immense responsibility. He is heavily overburdened. Organization and teaching occupy most of his time. He has attained his eminent position by his work in his particular field and would far rather continue this work. He has 100 or more beds in his 'firm'. The vast majority of the actual practice of medicine must perforce be relegated to his assistants. If his staff is subject to constant changes (and it is apparent that such is the case) then the patient is the sufferer.

However competent the younger assistants may be, they lack the experience and the judgment which can only be attained by a profound knowledge of human beings together with a prolonged association with a teaching hospital. The patient-doctor relationship which exists in private practice does not exist in full-time hospital service where work can be relegated to juniors. It is only when the doctor carries full responsibility himself that he acquires that knowledge of humanity which plays such an important part in the practice of medicine.

One of the greatest surgeons of the century, Dr. A. O. Whipple¹ of New York, gives his opinion on this matter as follows:

'Yet, with all the advances which have been made in the past half century, there still remain problems that need the advice of the older more experienced surgeons and their guidance in the clinics where residents are being trained. Sound judgment comes with experience and proper conduct with integrity. Though technically many residents in their last year of training become as clever as their senior attending surgeons, they have much to gain from them in understanding when to operate and when not to, what, when, and how to tell patients unwelcome news—especially families—how far to go and when to stop in operating for cancer. The surgical chief and his staff of associates should take time and show a real interest in making rounds with his residents, and should assist them in some of their difficult operations. For it is in these close contacts that the older surgeon's greater experience can be shared with his resident staff to their great benefit.'

'It is in the field of radical surgery for cancer that this relation can be most helpful. With the factors of safety which have been developed, the length of time taken, and the amount of tissue that

can be removed are not as important as the question "How much will life mean to the patient after operation in terms of comfort and function?" The presence of intolerable pain and vesicovaginal and rectovaginal fistulas in a woman with grade III uterine cancer is justification for pelvic exenteration but not if, on exploration, the peritoneum and intestinal tract are invaded by the cancer. There comes a time when patients should be allowed to die comfortably. There is a fundamental difference between controlled sedation and euthanasia.

Finally, the example of the surgical chief and his associates in their integrity and professional conduct and in their doing honest surgery as well as in their relations with their confreres in medicine and the other specialities, including their attitude towards the division of fees, is of paramount importance in shaping the character and future conduct of the residents. This relationship is well illustrated in the operating room. The surgical team is like a quartet or quintet in chamber music, in its tempos varying from allegro to adagio to scherzo and finale, but maintaining harmony and without the presence of prima donnas.

The social aspect of medical life in hospital has been completely altered. Instead of the harmony which was the keynote under the honorary system, there now exists a general atmosphere which can only be described as *frustration*. Remuneration is inadequate, making for uncertainty in regard to the future. People are unhappy about the making of appointments. The Hospital Board which did such a magnificent job of work, has been largely shorn of its authority. Their recommendations are not always accepted. Everyone is nervous that politics enter into matters which are in no sense political. Suffering humanity should never be allowed to become the pawn of parties.

It is almost impossible to get anything done in hospital. The Provincial approval of hospital appointments takes so long that it has happened on occasion, that when approval has eventually been forthcoming, the appointee has become installed in some extra-hospital position. The payment of technicians is so poor that it is impossible to obtain or to keep suitable personnel. The full-time staff has a preponderating say and sway in hospital affairs. The part-time staff feels slighted. They feel, also, rightly or wrongly, that ultimately hospitals will be run by an entirely full-time staff.

All this adds up to a deterioration of those cordial relationships which are necessary to good work and happiness in any Institution.

I do not know the answer. If hospitals were autonomous and entirely removed from political influences, the problem would be largely solved.

OPSOMMING

Die vernietiging van die ere-stelsel en die ekonomiese gevolge wat die gratis hospitalisasieskema vir sowel die publiek as die mediese beroep meegebring het, word in oënskyn geneem. Die aandag word gevestig op die verslegting van die vriendelike verhoudinge wat vroeër bestaan het en wat nodig is vir goeie werk en geluk in enige inrigting.

Ten slotte word daar aan die hand gedoen dat dit wenslik is om hospitale heeltemal selfbesturend te maak en om hulle van alle politieke invloed te bevry.

REFERENCE

1. Whipple, A. O. (1955): *An Old Surgeon Views the Surgery of Today*, Surg. Gynec. Obstet., Golden Anniversary.

SWELLINGS OF THE NECK

LYMPH GLANDS

JAN H. LOUW, CH.M.*

and

C. F. M. SAINT, C.B.E., M.D., M.S., F.R.C.S., Hon. F.R.A.C.S., Hon. F.R.S.M.†

Department of Surgery, Medical School, Mowbray, C.P.

Swellings of the neck are commonly encountered in clinical practice. Many of them are superficial and readily lend themselves to detailed examination; it is therefore often possible to make the proper diagnosis on an assessment of the history and physical exam-

ination alone. In many cases, however, special investigations, e.g. endoscopy, radiography, haematological examination and serological tests are required, and not infrequently a biopsy for bacteriological or pathological examination is necessary.

In general, most swellings are due to congenital malformations, injury, infection and neoplastic formation. In the neck the possibility of malignancy is so great that an

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accurate diagnosis must be made without delay. If there is any doubt about the nature of the swelling, biopsy should be performed to establish the exact pathology.

In a survey of the various swellings which may be encountered in the different tissues and regions of the neck, lymph gland enlargements merit special attention because lymph nodes are present in every part of the neck and are the site of origin of the largest proportion of cervical swellings. Lumps arising in other structures are more conveniently considered on a regional basis. For this purpose it is customary to subdivide the neck into different zones, viz. the midline and the anterior and posterior triangles (Fig. 1).

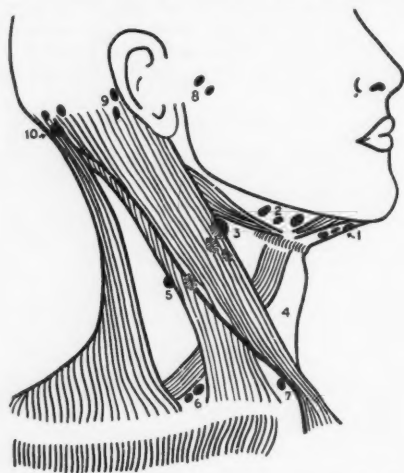


Fig. 1. The muscular triangles and lymph glands of the neck.

- | | |
|---|--|
| 1. Submental triangle and glands. | upper deep cervical group of glands encroach on this triangle. |
| 2. Submandibular triangle and glands. | 6. Supraclavicular triangle and glands. |
| 3. Carotid triangle. Glands of the upper deep cervical group, including the 'tonsillar' gland, encroach on this triangle. | 7. Anterior members of the lower deep cervical glands. |
| 4. Muscular triangle. | 8. Pre-auricular glands. |
| 5. Occipital triangle. The posterior members of the | 9. Posterior auricular glands. |
| | 10. Occipital glands. |

The *midline* extends from the chin to the upper end of the sternum and includes the submental triangle.

The *anterior triangle* is subdivided into submandibular, carotid and muscular triangles.

The *posterior triangle* is subdivided into an upper occipital and a lower supraclavicular triangle.

The sternomastoid muscle is an important visible and palpable landmark in this subdivision and, furthermore, some swellings of

the neck arise within or underneath the muscle itself.

It is proposed to discuss swellings of the neck under the following headings:

- A. Lymph Glands.
- B. Midline.
- C. Anterior triangle.
- D. Posterior triangle.
- E. Sternomastoid.

A. SWELLINGS OF LYMPH GLANDS

Swellings of lymph glands are usually multiple; few other swellings are. Lymph glands occupy certain definite anatomical positions and no single lymph gland occurs strictly in the midline of the neck. The enlargements are usually individually ovoid at first but later tend to lose their shape as they grow larger or become matted together.

In adults lymphadenopathy is always indicative of some pathological process, either past or present, and demands biopsy if the diagnosis cannot be made by other means.

The common enlargements are secondary to some primary focus of infection or malignant disease and the situation in which they occur is determined by the primary lesion. This is chiefly a question of simple anatomy with the reservation that if the main avenue of drainage is blocked, circuitous routes of lymph spread may occur, including so-called 'retrograde' spread.

Swellings due to primary lymph node affections may occur in any part of the neck but particularly in the carotid and supraclavicular triangles.

Enlargement of the cervical lymph nodes also occurs, and is often the presenting feature, in conditions associated with generalized lymphadenopathy.

I: INFLAMMATORY ENLARGEMENTS

These occur at all ages but are most commonly encountered in children.

1. ACUTE INFLAMMATORY SWELLINGS

Acute pyogenic infection of the cervical glands is frequently seen in children. The glands most commonly affected are the submental and submandibular secondary to septic foci in the mouth or on the face (Figs. 2, 3), the upper deep cervical (tonsillar), secondary to buccopharyngeal infection (Fig. 4) and the occipital, secondary to infection of the scalp (Fig. 5). In the last, pediculosis capitis is a common underlying cause.

The whole story of acute inflammation is epitomized in these cases. The swelling comes up quickly and is heralded and accompanied by pain which may be very severe. Fever and



Fig. 2 (Left). Acute submental lymphadenitis secondary to a septic abrasion at the angle of the mouth.
Fig. 3 (Right). Acute submandibular lymphadenitis. Primary lesion in the mouth.



Fig. 4 (Left). Acute pyogenic infection of the 'tonsillar' gland secondary to follicular tonsillitis.
Fig. 5. (Right) Suppurative occipital glands. Note the infection of the scalp.

toxaemia are present and the local manifestations depend on the stage of the pathology.

Until retrogression sets in, pain is continuous and it becomes throbbing when pus forms. The swelling is hot, acutely tender,

firm and fixed with a smooth surface and ill-defined edges which shelve into the surrounding structures. Adjacent glands enlarge and quickly become matted together.

Should suppuration occur, the centre of



Fig. 6. Suppurating submental glands with oedema and inflammation of the overlying skin.

exact site of discharge commonly being indicated by the most tender point. This is followed by rapid relief of pain and subsidence of the swelling. Deep-seated abscesses may track widely before coming to the surface and before the introduction of antibiotics they were often of a very serious nature.

If the infection is overcome before suppuration occurs, the pain and swelling steadily diminish.

2. CHRONIC INFLAMMATORY SWELLINGS

(a) *Chronic Pyogenic Infection.* In some patients the inflammatory reaction to pyogenic infection of the lymph glands continues at a much slower rate than that detailed above. Pain is less severe and the swelling may reach considerable dimensions over a period of days or even weeks before pus forms. This type of reaction can sometimes be attributed to sulphonamides or antibiotics given in inadequate dosage to cases which otherwise would have developed the typical acute type of response (Fig. 7). In other cases it is secondary to chronic sepsis, due to an attenuated infection, and this applies particularly to enlarge-



Fig. 7 (Left). A large submental abscess of 3 weeks' duration in a child who had received penicillin for submental lymphadenitis.



Fig. 8 (Right). Chronic suppurative adenitis of the occipital glands due to attenuated infection from the scalp.

the swelling becomes increasingly soft and fluctuant. As the pus comes to the surface the skin becomes adherent to the swelling, inflamed and oedematous (Fig. 6). Finally discharge occurs at the apex of the swelling, the

ment of the occipital nodes in infections of the scalp (Fig. 8).

This subacute type of reaction often gives rise to difficulty in diagnosis because the picture may closely mimic tuberculosis, espe-



Fig. 9 (Left). Primary chancre of the upper lip with enlargement of the submental glands.

Fig. 10 (Right). Late secondary syphilide who responded dramatically to treatment. The possibility of coincidental tuberculous infection could not be excluded.

cially when the 'tonsillar' nodes are affected. The difficulty is increased by the fact that mixed tuberculous and pyogenic infections of these glands are not uncommon.

In yet other patients a more chronic type of infective enlargement of the lymph glands is seen. This is entirely painless from the start and the affected glands are medium-sized, firm and shotty, but may be slightly matted together. The upper deep cervical and occipital glands are most commonly affected, and the latter particularly may simulate the lymphadenopathy of secondary syphilis and rubella.

(b) *Syphilis*. Syphilis may affect the lymph nodes in the primary and secondary stages. The swellings are rarely of any size, are multiple and typically remain discrete and shotty. They are usually more localized in the primary and more diffuse in the secondary stage. Other evidence of the disease, e.g. a primary chancre (Fig. 9) or secondary skin lesions (Fig. 10) usually render the diagnosis straightforward.

The enlarged glands of secondary syphilis often persist in the occipital region for some

time, and their presence in a chain along the posterior border of the sternomastoid (glandulae concatenatae) is presumptive evidence of the disease.

(c) *Fungi*. Fungi rarely cause lymphadenopathy and the common types such as actinomycosis extend by continuity of tissue without involvement of the glands of drainage. In histoplasmosis, however, lymph glands may become enlarged and closely resemble tuberculous or Hodgkin's glands. Associated oropharyngeal and pulmonary lesions are common. In sporotrichosis of the face the lymph nodes of the neck may enlarge and soften to simulate a cold abscess.

OPSOMMING

1. Swelsels van die limfkliere in die omgewing van die nek verdien spesiale aandag, want hulle is die oorsprongplek van die oorgrootste meerderheid van nekswelsels.

2. Knoppe wat in ander strukture ontstaan, sal op 'n streekgrondslag oorweeg word.

3. In hierdie artikel word akute en kroniese ontstekingswelsels van die limfkliere in die nek beskryf en met tipiese kliniese foto's geïllustreer.

(To be continued)

SKELETAL CHANGES IN ENDOCRINE AND METABOLIC DISORDERS

I. CUSHING'S SYNDROME

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This condition is produced by prolonged excess of circulating glucocorticoid hormones (cortisone-like substances), whose essential action is catabolic, or anti-anabolic, preventing the rebuilding of body protein. Hence there occur:

- Atrophy of skin, with purple striae;
- Atrophy of vascular tissue, with easy bruising;
- Atrophy of muscles with extreme weakness;
- Deviation of food to excessive fat and car-

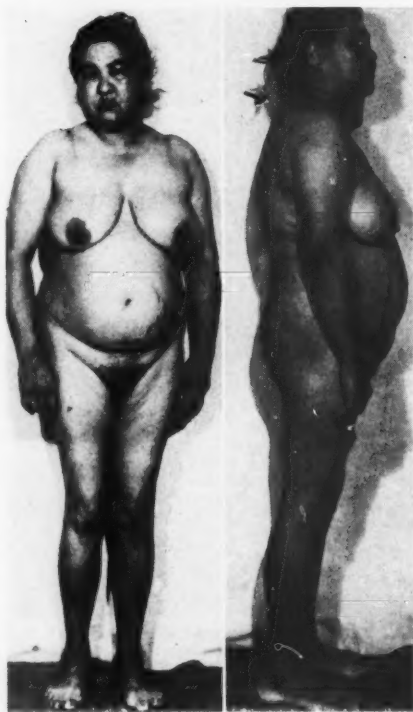
bohydrate formation, leading to obesity and diabetes;

Atrophy of bone leading to osteoporosis; Amenorrhoea and hypofertility.

Less easy to understand is the hypertension, leading to retinopathy and renal damage, the polycythaemia, and the facial hirsutism in females. The particular distribution of fat leads to the characteristic 'moonface' and 'buffalo hump' (Fig. 1).

The syndrome may be associated with hyperplasia, adenoma or carcinoma of the adrenal cortex, or with long-continued high dosage with cortisone or ACTH. The rôle of the pituitary gland in this syndrome is not clearly understood—at present we must consider the disease to be adrenal in origin.

Trus masculinization (male body hair, male contours and clitoral enlargement) does not occur in 'pure' Cushing's syndrome, but only when over-production of androgens also occurs. In its own pure state this androgen over-production is seen in the 'adrenogenital



Figs. 1a, b. Cushing's syndrome in a Coloured woman of 44, presenting with malignant hypertension and dimming of vision. Note the moon face, purple striae, obesity, kyphosis and 'buffalo hump' (arrow). Hyperplasia of the adrenals was found at laparotomy.



Fig. 1c. Same woman aged 30. The change in facial appearance as judged from old photographs is frequently the best evidence in favour of a diagnosis of Cushing's syndrome. (Dr. V. Schrire's case. Thanks are due to him).

syndrome' and is caused by hyperplasia or tumour of the androgen-producing cells of the adrenal. Carcinomas of the adrenal are, however, particularly likely to produce a mixed picture of Cushing's syndrome with masculinization.

Effects on Bone. Osteoblastic formation of



Fig. 2. Gross spinal osteoporosis with multiple vertebral body collapse, and ballooning of disc spaces.

bone matrix is inhibited, calcium phosphate cannot be deposited on what is not there, and osteoporosis results. The spine, particularly, becomes rarified, the vertebral bodies collapse, undergo multiple fractures and are distorted by expansion of intervertebral discs into them (Fig. 2). Spinal pain, weakness, kyphosis and loss of height results.

In pre-adulthood there is abrupt cessation of growth in height caused by inhibition in the laying down of epiphyseal bone.

The net loss of calcium from the skeleton may be so rapid as to raise the serum calcium level, produce massive hypercalcuria and even renal stones.

Treatment. Adrenalectomy is usually successful and may even allow the laying down of new bone to be evident radiologically—the only obvious healing in any type of generalized osteoporosis, as far as I am aware.

OPSOMMING

Die toestand bekend as Cushing se sindroom word kortliks beskryf.

Die kenmerke van hierdie toestand kan geheel en al toegeskryf word aan die langdurige inwerking van 'n oormatige hoeveelheid glukokortikoïde-hormone.

Osteoporose is die opvallendste skeletverandering.

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EPIDEMIC FOLLICULAR KERATOSIS

IN THE TRANSVAAL

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Outbreaks of an apparently infectious or contagious exanthem, with keratosis of the hair follicles, have been reported sporadically since Brooke's original description in 1893.¹ It is not clear whether these are outbreaks of the same disease; the two most recent, however, showed considerable resemblance. They were reported from Switzerland by Gonin² and Schuppli,³ and from Cheltenham, England by Bowers.⁴ Our cases are similar to those

of the last-named, but certainly not identical with those described by the Swiss authors.

HISTORY AND RECOGNITION OF THE OUTBREAK

(a) In *Vanderbijlpark*, during 1954, we were asked to see a skin condition which superficially resembled the follicular hyperkeratosis of vitamin A deficiency, but differed in its distribution, suddenness of onset and

spontaneous, rapid recovery. Three cases were seen within a few days. Each had had a rash on the palms preceding the phrynodema-like eruption. This rash did not fall into ready identification as one of the limited group seen in everyday practice affecting the palms. When a fourth case was seen enquiries were instituted. The 'team' practice in this area enabled us to learn from colleagues that they had seen several cases of the same type, but had had to leave them undiagnosed. They were able to report, however, that these cases all ran a benign course and that disappearance of the rash—without treatment—might be expected in 4 weeks.

In July 1954 we were able to see a few cases in consultation and the diagnosis of epidemic follicular keratosis suggested itself. No further cases were seen that year and the investigation was left in abeyance.

In April 1955 the 'team' (alerted to the possible reappearance of the rash) reported a similar case affecting *inter alia* the palms and the soles and causing a mild itch. There were, however, certain differences from the 1954 cases. The whole picture was now that of an acute, progressive condition with mild systemic upset and malaise. The first cases seen presented a wide-spread, florid, papular eruption—suggesting papulo-vesicles but containing no fluid when punctured—affecting the whole body including the face, palms and soles, accompanied by a feeling of 'flu', slight fever, backache and malaise on the first day. After the first week the rash in these cases subsided from its bright red, vesiculo-papular state to a hyperkeratosis, identical with that of the 1954 cases. It became obvious that the condition was now being seen in its entirety as an acute exanthem, subsiding (after a short systemic illness) into a hyperkeratotic follicular eruption for which the diagnosis of vitamin A deficiency or epidemic follicular keratosis had been considered the previous year.

At this point 3 cases were seen on the first day of the eruption, all showing a white halo about the florid and discrete papules, especially on the thigh (Fig. 1). This halo was felt to be an important diagnostic characteristic of the condition, and reported as such. The group then immediately recalled cases with this halo seen by all of them and diagnosed as German measles or occasionally as 'fourth disease'. They had also considered the possibility of insect and midge bites and of mattress eruption, but the sudden appearance (often overnight) of a widespread

eruption without intense itching, and often in one member of a family where another might have shared the bed and woken unaffected, had excluded this diagnosis. A further disturbing factor had been the persistence of the rash in one form or another over a matter of weeks. Apart from the clinical characteristics of the condition which the practitioners now recognized, the most common diagnosis of German measles had been upset by the frequent response of the parents: 'Oh, not German measles *again*, please!'

Two cases then appeared in one household, and doctors' families became affected. The infectious or contagious aspect gained further importance when several cases, up to 3 or 4, were being seen in one day. All gave the picture of a mild, possibly febrile, systemic reaction following by the rash on the first or second day.

Duration of the Epidemic. The first cases of the epidemic in 1955 in Vanderbijlpark were seen during the first week of April. No cases have been reported since 4 May. During this period of 4 weeks 27 cases were recognized among 16,000 souls falling under the care of 10 doctors, with 9 more cases in the Johannesburg area. We have personally studied these 36 cases.

(b) In *Johannesburg* Dr. E. K. Dunning first drew our attention to the occurrence of cases in January 1955. One of these immediately recalled those seen previously at Vanderbijlpark. This child, seen on the eighth day, presented only the hard papules of the later stages, some with an adherent comedo-like centre. Since then 8 more cases have been seen and 15 more reported verbally. As at Vanderbijlpark, principally children were affected, but 2 adult cases have also been seen. The parent of a girl in boarding school in Pretoria, who is also a trained Nursing Sister, has told us that a condition indistinguishable from the disease described below has recently affected the majority of the boarders.

CONSTITUTIONAL SYMPTOMS AND SIGNS

As the identification of the disease was coincident with the recognition of its benign nature, the 36 cases discussed here were allowed to run their natural course without treatment. The clinical picture provided was remarkably uniform, except for minor differences between adults and children. It was especially noticeable that children were ill before the rash appeared, and adults after.

(a) *Prodromata:* i. *Children.* Nearly all

children were 'off colour' for 1-2 days before the rash appeared. Mild sore throat was complained of in some cases. The temperature was usually in the region of 99-100° F.—but might be normal, or as high as 104° F.

ii. *Adults*. The majority felt perfectly well and none had any specific symptoms at this stage.

(b) *Eruption*: i. *Children*. On the day of the eruption or the next day, all children returned to normal general health.

ii. *Adults*. With the appearance of the rash, or within the next 24 hours, the first constitutional symptoms of cold, sore throat, or of 'flu' were noted. The temperature did not rise as high as it did in children and was usually normal, never above 100° F. In contrast to the low temperature, the face on the first day was usually flushed. Pain on movement of the eyes was common, as was a preference to lie with the eyes closed. Most adult patients took to their beds at this stage. No raised temperatures were recorded on the second day of the malaise. Recovery was general on the third day, although tiredness persisted—especially in women—for upwards of 1 week.

(c) *Special Signs and Symptoms*: i. *Joints*. The majority of adolescents and adults complained of some joint pain and stiffness on the second to fourth days of the disease. The small joints of the affected fingers were swollen. Larger joints, e.g. the knee, were not swollen.

ii. *Bowel*. A mild mucous enteritis, with bowel actions up to 4 times a day, occurred in many cases immediately before (in children) or coincident with the appearance of the rash (in adults).

iii. *Glandular Involvement*. This was minimal with usually 1 gland in 1 group enlarged. There was no definite evidence that the drainage area of the gland involved was also the area in which the rash had first been noted, but this was suggested by several patients. The inguinal, the axillary and the posterior occipital glands were those most frequently enlarged.

(d) *Complications*. There appeared to be none. One child developed basal pneumonia on the second day of the rash, but this may have been incidental. Penicillin produced a rapid recovery of the pneumonia, but did not in any way affect the course of the exanthem.

(e) *Laboratory Findings*: i. *Blood Counts*. Haemoglobin and red cells were unaffected. Leucopenia was present, the usual figure being from 4,000-6,000 per c. mm. Polymorpho-

nuclears varied from 40-60% of the total white count. The highest eosinophil percentage recorded was 7.5%. Small numbers of atypical lymphocytes were seen, up to 4%. They were reported as 'containing basophilic and in some cases vacuolated cytoplasm. These cells are usually associated with a virus infection'.

ii. *Sedimentation Rate*: (6 Cases). This varied from 5-20 mm. in 1 hour (Wintrobe).

The *Wassermann reaction* was negative in the 4 cases examined; the antistreptolysin titre was normal in the 1 specimen submitted.

iii. *Rickettsial Complement Fixation Tests*. These were taken from cases 3 weeks after the onset of the rash and were negative.

iv. *Stools*. No proper investigation was completed as mucus had disappeared from the stools, usually before patients presented themselves. No specific abnormality was noted in the stools studied. Viral studies were not done.

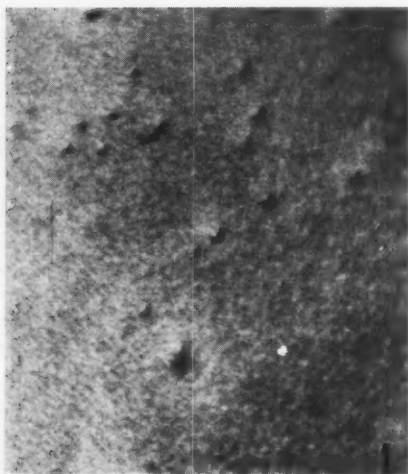
v. *Urine*. No chemical or microscopical abnormality was noted.

vi. *Histopathology*. Several biopsy excisions are being studied with Dr. H. Lurie, of the South African Institute for Medical Research. The findings will form the subject of a separate contribution.

THE EXANTHEM

The following description is based on cases seen by us, our co-workers and several colleagues. We were fortunate in that each of us was able to study a case occurring in his own family, thus ensuring close daily scrutiny of the evolution and course of the rash.

Evolution. The first lesions appear within 48 hours from the first constitutional symptoms in children; in adults they sometimes precede the constitutional symptoms. In many cases the first small macules appear on the thighs and forearms, in others on the central trunk. Within a very few hours the lesions become papular. During the first 72 hours the rash becomes more profuse over the trunk and proximal parts of the limbs, and scattered macular lesions are seen on the palms and soles. In some children the areas commonly affected by keratosis pilaris (and the phrynoderma of vitamin A deficiency) are markedly affected and the rash is then best seen and felt on the backs of the arms, buttocks and on the thighs, especially on the backs and outer sides. Fresh lesions do not, as a rule, appear after the third day. When fully developed, the rash is most profuse on



experienced mild itching. On the palms a peculiar sensation, sometimes described as a 'sore itch' has been reported.

Morphe. The lesions appear first as macules; except on the palms and soles, they become papular within 12 hours. These papules vary in diameter from 3-5 mm. and are often, during the first few days, surrounded by a characteristic white halo about 5 mm. wide (Fig. 1). This appearance was noted independently by the Vanderbijlpark 'team' and Dr. E. K. Dunning of Johannesburg. The papules are pink to red in colour and often appear to be so tense as to be blanched on their summits, giving the impression of being vesicular. Puncture, however, does not lead to the escape of fluid. Colleagues have mentioned that papules are occasionally purpuric, but we have not been able to verify this personally.



Fig. 1. Lesions on the second day. Note surrounding blanched area ('halo').

Fig. 1a. Adult male. Fourth day of the eruption.

the trunk (Fig. 1a); few lesions are seen below the knees, but the forearms show papules on all aspects. The face is affected to a varying degree; in none of our cases has it shown so profuse an eruption as on the trunk. In one patient the 'side whisker' area was first affected by closely aggregated, follicular papules; in others only a few scattered lesions were seen over the central area. When the scalp is affected the papules are sparse. The mucous membranes are not affected.

In the majority of patients there are no subjective symptoms, but a few children have

From the third day onwards many of the papules, when examined under the loupe, show a tiny central spine or a minute, dark, comedo-like spot. When this change affects a large number of lesions a 'nutmeg grater' sensation is felt on stroking the area (Fig. 2). During the second week, when the majority of lesions have subsided, faint staining is left and careful inspection shows prominent follicular 'thorns' at the site of some, while others have developed larger, black, comedo-like centres. Both types are adherent, but on forcible removal some bring with them an



Fig. 2. Boy aged 13. Seventh day. Note follicular papules and spines (giving 'nutmeg-grater' feel). The darkest lesions are pigmented naevi.
Fig. 3. Adult male. Third week. Comedones on forearm.

imprisoned hair. In one case papules over the centre of the chest had coalesced to form an oval area about 1 inch in diameter, reminiscent of the type resembling granuloma annulare described by Schuppli.

Though many of the lesions are frankly follicular, this is not invariable, as is shown by those appearing on the palms and soles, where no pilo-sebaceous follicles exist. One biopsy excision, in fact, has shown the maximum reaction around the sweat glands.

Subsidence. The papules flatten and fade from the sixth day; the macules on palms and soles have usually disappeared after a week. Many of the papules leave a faint brownish stain which, in most instances, disappears under diascopic pressure. The follicular spines and comedones, which appear prominently during the second week, persist for periods of up to 2 months (Fig. 3). During the stage of subsidence the exanthem (which, during the first week, does not give the impression of being predominantly follicular) consists exclusively of follicular papules with a central spine or adherent comedo-like structure. These follicular lesions are by no means limited to the sites favoured by keratosis pilaris and may, indeed, spare these completely.

DISCUSSION

1. COMPARISON WITH PREVIOUS OUTBREAKS

(a) There is no question that we are here dealing with a form of epidemic follicular keratosis. Two large previous outbreaks, those of Schuppli (Basel) and Bowers (Cheltenham)

are available for full comparison and it is instructive to tabulate the resemblances and differences between the 3 series. This comparison is somewhat involved, in that the Basel outbreak comprised 3 distinct clinical types of lesion, more than one type sometimes co-existing in the same patient. However, 90% of Schuppli's cases in children took the form of a slowly developing comedo-acne, without signs of inflammation. We have selected this type for comparison. Only 2 of his cases presented a papular exanthem, which would be a fair description of the disease as seen in Cheltenham and in the Transvaal.

Although Bowers believed that he and Schuppli were dealing with the same entity, a careful study of their reports makes this unlikely. In the Basel cases we find an account of a slowly developing, non-inflammatory comedo-acne in the great majority of cases. This comedo-acne frequently produces horn cysts, for which various treatments were used, unsuccessfully, for some time. In the Cheltenham cases, on the other hand, the picture was that of an acute exanthem. This, it is true, was associated with comedo formation in some lesions and a variable degree of horny plugging in the follicle mouths. *The skin returned to normal in from 4-10 days.*

Table I reveals that the Transvaal cases more nearly resembled the Cheltenham than the Basel description. There appears, however, to be some difference in the distribution, and in our cases it has been quite common to find indolent follicular lesions (comedones and spines) persisting for some weeks.

TABLE 1: COMPARISON OF THE MAIN FEATURES OF EPIDEMIC FOLLICULAR KERATOSIS DESCRIBED IN BASEL, CHELTENHAM AND IN THE TRANSVAAL

	<i>Basel</i> (Common Type)	<i>Cheltenham</i>	<i>Transvaal</i>
<i>Evolution of exanthem</i>	Gradual	Sudden	Sudden
<i>Primary lesion</i>	Comedo	Inflammatory papule	Inflammatory papule
<i>Development of horn cysts</i>	Common	Not reported	Not seen
<i>Duration of exanthem</i>	More than 2 months*	7—10 days	1—8 weeks
<i>Itching</i>	Not mentioned	Rare and slight	Rare and slight
<i>Secondary pustulation</i>	Described	Not seen	Not seen
<i>Distribution of rash</i> {	<i>On abdomen</i> ..	Rarely	Occasionally
	<i>On legs</i>	Rarely	Usually on thighs and knees
<i>Constitutional prodromata</i>	Frequent	Rare	Frequent

* Schuppli's paper gives no clear indication, but he states that the comedo eruption may take 2—3 weeks to develop, and that an average of 2 months elapsed between the first lesion and the first visit to a doctor.

(b) Schuppli³ summarized and discussed previous epidemics of follicular keratosis. The original publications are not immediately available in South Africa. Brooke¹ described 10 cases, of which one lasted 22 months.

Rocamora⁵ saw 19 cases in whom the skin lesions seemed to be similar to those of our patients, but lasted 3-4 months. Ulcers in the mouth and rhagades were present in all cases and lasted even longer than the cutaneous lesions.

Numerous French authors are also cited by Schuppli as having seen an outbreak in Paris in 1944, variously described as an oil acne from impure brilliantine and as a comedo-acne, affected whole families and even urban districts, so that Schuppli believes it to be similar to the epidemic described by him.

None of these 3 epidemics seems to be identical with the present Transvaal cases. As in Schuppli's series, one gets the impression of a gradual eruption of acneform lesions with a duration of months; in Bower's Cheltenham outbreak and in ours, on the other hand, we seem to be dealing with an acute papular exanthem, appearing explosively and clearing rapidly.

2. SPORADIC CASES

We have the impression that, during the past few years, occasional cases have been seen

which, in the morphe and duration of the eruption, have closely resembled those described here. We recall, in particular, cases in children in whom the rash, following on a slight sore throat has, for want of a better diagnosis, been termed a 'streptococcide'. These patients recovered within a week or so and it is regretted that none of these was followed up to see whether follicular lesions persisted. One of us also sees African (Bantu) patients at hospital and can recall, within the last 3 years, a few cases of adults who presented themselves with a similar, non-itchy rash of a few days' duration. None of these patients returned and it is therefore probable that they recovered promptly.

3. AETIOLOGY

The disease seems to be an infectious exanthem, attacking principally children, but not sparing adults. Our cases have occurred among subjects living within 40 miles of Johannesburg, but as this is the most densely populated area of the Transvaal and as cases would hardly be referred from longer distances with such a mild and short-lived disease, no conclusions can be drawn from this fact.

The incidence of cases was without pattern. A husband and wife were affected at the same time and one of the husband's contacts at

work. For the rest, there were no second cases in families, even among those sharing the same bed. It is of interest that there was a case in the family of each of us, both occurring in the middle of the outbreaks.

It has been suggested⁴ that the incubation period is about 3 weeks, but no evidence can be brought on this point.

The occurrence of the rash in husband and wife at the same time suggested an insect bite, but so far review of the insects and mites has not suggested a vector.

In the Cheltenham outbreak the water supply was suspected as a possible transmitter of an infection. It is therefore recorded that Vanderbijlpark and Johannesburg draw their water from the same source.

Schuppli investigated all the usual sources of an outbreak of infectious disease and was unable to incriminate any factor.

SUMMARY

1. An outbreak of follicular keratosis in epidemic form took place in the Transvaal in 1954-55. The authors personally saw 36 cases and many more were reported to them.

2. It is probable that many further cases have been labelled rubella or drug eruption as epidemic follicular keratosis is unknown in South Africa.

3. The disease most nearly resembled an outbreak which occurred in Cheltenham (England) in 1952. It differed in many respects from the Basel (Switzerland) outbreak of 1946-47.

4. Enquiries have not revealed the cause or means of transmission of the disease.

OPSOMMING

1. 'n Epidemiese vorm van follikulêre keratose het in 1954-55 in Transvaal voorgekom. Die skrywers het persoonlik 36 gevalle gesien, en talle ander is by hulle aangemeld.

2. Dit is waarskynlik dat baie van die ander gevalle as rubella of 'n geneesmiddel-uitslag gediagnoseer is, want epidemiese follikulêre keratose is onbekend in Suid-Afrika.

3. Die siekte het ten nouste ooreengestem met die siekte wat in 1952 in Cheltenham (Engeland) uitgebreek het. In baie opsigte het dit verskil van die siekte wat in 1946-47 sy verskyning in Basel (Switserland) gemaak het.

4. Navorsing het nie die oorsaak van die siekte of die wyse waarop dit oorgedra word, aan die lig gebring nie.

We wish to thank the following colleagues who brought cases of epidemic follicular keratosis to our attention, and many of whom followed their progress and assisted in their investigation: Dr. M. Chitters; Dr. D. Dickson; Dr. C. Diemont; Dr. E. K. Dunning; Dr. D. du Plessis; Dr. H. Exner; Dr. H. Fergus; Dr. S. Gordon; Dr. R. Keet; Dr. J. Laurence; Dr. H. Lurie; Dr. E. E. Skinstad; Dr. F. Vorster; Dr. J. Watson.

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A COMPLICATION OF NORADRENALINE (LEVOPHED) THERAPY

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The use of noradrenaline is increasing daily and its value so far has been inestimable. In many instances it has proved to be life-saving. We used it recently on a patient whose certain death it prevented. However happy the final result may have been, the patient incurred a slough of almost the whole of the dorsum of his left foot (the site of the intravenous infusion of noradrenaline). The cause of the slough was a direct result of a leakage of the solution into the surrounding tissues. Dis-

cussion with other surgeons at the Johannesburg General Hospital disclosed that tissue necrosis resulting from noradrenaline infusions are by no means rare.

We present this case with a review of the current literature, discuss this complication and offer suggestions for the prevention and treatment of the condition.

CASE REPORT

Mr. W., a European male aged 46, was admitted on 5 April 1954 at 3.20 p.m. with a classical history

of acute appendicitis of 30 hours' duration. His past history was completely negative. Four hours later an appendectomy was performed. The organ had ruptured and a general peritonitis was present. The pelvis and the area of pathology were drained after the peritoneal cavity had been sucked out. Wangenstein suction and a drip were instituted.

On the morning of 11 April (6 days post-operatively) the patient developed severe diarrhoea and vomiting, and became extremely shocked. His blood pressure was not recordable and he was almost moribund. At this stage noradrenaline therapy was introduced and continued (using concentrations of 3-4 ampoules per vacolitre) for the following 48 hours, during which time his blood pressure was maintained at satisfactory levels and his general condition improved. He went on to complete recovery, apart from a rather extensive area of necrosis (Figs. 1 and 2) on the dorsum of the left foot (the site of the noradrenaline infusion).



Fig. 1. The parchment-like necrotic area, dry and well demarcated, 4 days after the infusion.

Fig. 2. The site after surgical removal of the slough.

DISCUSSION

Since Goldenburg and Apgar¹ first published their results with noradrenaline as a pressor drug in patients undergoing thoraco-lumbar sympathectomy for hypertension, it has often been administered in doses of 5-40 micrograms per minute in the treatment of many medical and surgical types of peripheral vasomotor collapse.² Though noradrenaline may require more attention than other pressor drugs, such care is the first requirement of any patient in an acute hypotensive state. Tissue necrosis resulting from a subcutaneous infiltration of the solution should therefore easily be avoided.

As a review of the literature reveals a scanty interest in the subject, this paper is intended to warn all practitioners of the danger and to discuss ways of averting it. The scar of a noradrenaline success cannot compensate the patient whose recovery from a state of moribund shock is beyond his memory.

The numerous administrations of noradrenaline without untoward effect locally bears little relation to the cause of the local necrosis. The pain, morbidity and invalidism following this unfortunate incident must be considered as a major factor whenever it is planned to restore a hypotensive state by the use of this drug. Preventive measures must therefore be taken to guard against its occurrence. As noradrenaline is a powerful vasoconstrictor, it may be assumed that local infiltration of the drug (from a drip running into the tissues) will result in an area of necrosis and slough in most cases. However, this is known not to be the case. Why then are we confronted with this serious problem only occasionally, and why does this powerful drug often remain completely innocuous?

CAUSATION OF THE CONDITION

(a) *Leakage from the Needle.* In our cases the effect was directly due to leakage, but Skelton, Mills and Moyer² observed it after prolonged administration directly into a vein. They attribute this to the peculiar conditions present in shock that lead to a reflux into the collateral veins through the capillaries to the pre-capillaries as a result of the hydrostatic pressure of the infusion fluid. A local necrosis of the vein wall after prolonged administration may be responsible. Bifulco³ (reporting on necrosis of the tissues of the leg in 5 cases) thinks that actual necrosis of the vein occurs (with concurrent venous and arterial spasm of the vessels of the same extremity). The underlying reason, he suggests, is that the sluggish venous circulation of the lower legs results in an increased concentration in the veins.

(b) *Strength of Solution.* In our cases the concentration of the drug has varied between 8 and 40 mg. per vacolitre (1000 c.c.). The literature bears out the point that the total amount or the concentration used are not as important as the duration of the infusion or the site of injection. These opinions are in keeping with our observations.

(c) *Duration of Infusion.* At the Johannesburg General Hospital bilateral adrenalectomy operations have been performed since 1952. These cases all demanded noradrenaline

administration for a period of 6-24 hours post-operatively. None of these cases was followed by local necrosis. Bergman⁴ quoted 5 cases in which infusions were given for a period of 8 days. Skin ulceration occurred in 3 cases. In one the concentration was 300 micrograms per c.c. and the patient developed necrosis in all 4 limbs. In one of our cases noradrenaline was given continuously for 36 hours with a resultant slough. It seems that the duration of infusion is important, though it does not explain the whole pathology.

(d) *Rate of Drip.* Housemen accustomed to intravenous work are well acquainted with leakage or even bursting of a vein when the rate of flow is too great for the size of the vein. Acute spasm and reduction in the size of a vein often occur after it has been interfered with. This, together with the introduction of a substance as vasopressive as noradrenaline will add to the likelihood of leakage or bursting when the vessel is subject to the pressure of a rapidly flowing infusion.

(e) *Site of Infusion and Mode of Administration.* Most authors are agreed that these 2 factors are very important. All the sloughing has been on the hand or foot, especially the latter. We assume that the peripheral veins used (thin walled and of narrow bore) will necessarily necrose earlier, allowing more rapid permeation. The subcutaneous tissues of this area are scanty and the infiltrated fluid will have less chance of wide diffusion and dilution than in more generously covered areas.

(f) *Sensitivity to the Drug.* Whether the unaccountably innocuous results of drips that have run into the tissues can be attributed to an insensitivity to the drug is not known. It seems quite possible that the variation in results following these accidents may easily be accounted for in this way, though the literature reviewed offers nothing on the subject.

(g) *Condition of the Patient.* Shock slows the circulation, especially in the peripheral stream. This results in a higher local concentration of the drug. The stasis, with anaemia of the vessel wall, results in weakening of the vascular structure with possible necrosis.

PREVENTION OF THE CONDITION

(a) *Choose the Best Site Available.* Noradrenaline is used in conditions of shock which commonly result in the absence of well-filled peripheral veins. The larger and more easily accessible veins of the antecubital fossa

should therefore be used routinely. The veins of the dorsum of the foot or hand should not be used. This is a brash statement as the introduction of noradrenaline is always a matter of extreme urgency. Therefore the casual insertion of a needle into a 'dangerous' area should only be temporary. It should be replaced by an infusion through an area of choice as soon as possible.

(b) *Method of Infusion.* Exposure of the vein for accurate introduction of the drip is ideal. The use of a long polythene cannula is desirable, for in this way the fluid may be infused into one of the larger veins with an attendant increased blood flow, dilution and distribution. This method also excludes the possibility of:

- i. Necrosis of the vein wall;
- ii. Rupture of the vein; and
- iii. Leakage from the puncture wound.

(c) *Rate of Flow and Concentration.* The primary aim with noradrenaline is to restore to the patient a normotensive state. This state should be arrived at *quam celerrime*. Nevertheless, the infusion must be started with a concentration of 1 ampoule per vacolitre (8 mg. per litre) and a rate of not more than 20 drops per minute. Constant supervision and assessment of the blood pressure at short intervals (e.g. very 4 minutes) should be adhered to strictly, for by this means alone may a normal equilibrium be reached without a toxic excess of the drug. It has been found repeatedly that the drug was useful only in great concentration and with rapid introduction, but even in these cases the final concentration and the rate of administration should be arrived at by graduated increases only.

(d) *Duration of Drip.* We agree with the advice offered by most authors that a drip should not be allowed to infuse into the same vein for more than 24 hours. This is difficult to attain in practice and if the care of and attention to (a), (b) and (c) are adhered to, this period of time can be increased.

TREATMENT OF THE CONDITION

This must lie in its prevention. Where the tissues have already been permeated by the vasoconstrictor, especially at the periphery of an extremity, the following regimen should be adhered to:

(a) The infusion must be discontinued at that site and re-introduced elsewhere.

(b) In the early case before tissue necrosis is evident, topical applications of vasodilators, e.g. glyceryl trinitrite gel or histamine ionto-

phoresis may be used with effect. However, even such local applications are not free from the danger of systemic vasodilator effects and aggravation of shock.⁵

(c) Broad-spectrum antibiotics must be given.

(d) Early consultation is necessary with the plastic surgeon for removal of the slough and grafting to prevent a lengthy morbidity.

(e) The patient may regard his new-found disablement or disfigurement an excellent reason for litigation. It is well, therefore, that a full and detailed record should be available for possible future legal complications.

SUMMARY

(a) A case with necrosis of the dorsum of the foot following noradrenaline administration is reported.

(b) The local complication (tissue necrosis) following the use of noradrenaline is discussed.

(c) The possible etiological factors associated with the occurrence of necrosis are considered.

(d) Suggestions for the prevention of local tissue necrosis are made.

(e) The treatment of the condition is outlined.

OPSOMMING

(a) Verslag word gedoen oor 'n geval van nekrose van die dorsum van die voet, volgende op die toediening van noradrenaline.

(b) Die plaaslike komplikasie (nekrose van die weefsels) ná die gebruik van noradrenaline word bespreek.

(c) Die moontlike etiologiese faktore wat met die voorkoms van nekrose geassosieer is, word ooreweeg.

(d) Wenke vir die voorkoming van nekrose van die plaaslike weefsels word aan die hand gedoen.

(e) Die behandeling van die toestand word in breek trekke beskryf.

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THE SCOPE OF RADIATION THERAPY

INCLUDING RADIO-ACTIVE ISOTOPES

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Public awareness of the grave problems of cancer has been increased by a knowledge of its growing incidence as well as the campaign of the National Cancer Association. Despite the knowledge gained since 1900 in all the related scientific fields, cancer has increased (except for skin cancer) in every system of the body.¹ Antibiotics and improved sanitation have increased the cancer death rate because more people live longer; but it must not be assumed that cancer is found only in the old.² Under 5 years there are more deaths from cancer than from infantile paralysis or from all the diseases of the ear or mastoids, and under 14 years there are more deaths

from cancer than from dysentery, whooping cough, diphtheria or measles.³ In the United States the death rate from cancer has almost doubled since 1900 (when it was 70 per 100,000) to 134 per 100,000 in 1945. By the year 2000, at the present rate, there will be no less than 324,000 cancer deaths yearly.

The death rate varies with sex and age. It is about 17% between 60-70 (which is also the peak period in the male). More women die between 35-54 years from cancer than from any other single disease; 40% of these cancer deaths are due to the uterus and the breast.

Apart from increased longevity, there must

be other factors in our mode of life responsible for the increase in some of the death rates in the various systems.

There is no doubt about a very definite increase in lung cancer.⁴ Whether this is due to smoking or to air pollution with carcinogens, or to both factors, the fact of the marked increase cannot be attributed merely to greater ageing. Ignorance of the changes which convert the normal into the cancer cell has made the prevention of cancer up to the present, an almost insoluble problem.

Early examination by the doctor and hence early detection will improve the survival rate from treatment; but this will avail in only a few systems of the body. Early examination of the mouth in a case with extensive leukoplakia will help to prevent the onset of cancer in the involved part if adequate treatment is instituted. Early detection of a chronic tongue ulcer opposite a jagged molar will help to prevent the development of a tongue cancer. Early detection of a bladder papilloma by skilled cystoscopy may prevent the onset of a carcinoma of the bladder. There is, however, no way of detecting pre-malignant changes in the brain, the kidney, the alimentary tract, the skeletal or the respiratory system without elaborate examinations or biopsy; and even daily biopsies will not reveal the sudden change which permits the pathologist to say that malignancy occurred on a particular day. Until we know what causes the malignant changes to take place, the high incidence must continue; although knowledge of the earliest symptoms and the insistence on early and repeated examinations may help to improve the survival rate.

It is obvious, therefore, that only in accessible cancers (e.g. of skin, mouth, tongue, bladder and larynx) can frequent examination in the cancer age reduce the incidence of malignancy. The prevention of cancer still depends largely on research into its causes. Just as the accessible cancers are easier to prevent and diagnose, so they respond best to radiotherapy. This is because they seem more radio-curable than the deeper seated cancers. Radio-curability, radio-sensitivity and radio-resistance will be defined in the sequel.

With very few exceptions, e.g. where radiation may clear up a pre-malignant keratotic patch on the skin or a leukoplakic area in the mouth, radiation cannot prevent cancer.

It is striking and in many ways disheartening that despite all the research for the past 50 years in so many scientific fields, and the vast sums of money spent on investigating

cancer, only 25% of cancer cases⁵ can hope to be cured completely by combined surgery and radiation (whether X-ray, radium or other radiation source). Another 25% could be cured if only they were examined earlier. These poor results mean that all methods of cancer therapy (whether by radiation, surgery, chemotherapy or hormones) have their limitations individually or in combination.

It is also a striking commentary on the limitations of radio-therapy, because the greatest advances in human knowledge have taken place in the field of radiation,⁶ precisely over the period in which the cancer death rate has increased so appallingly.

It is only 60 years since Roentgen discovered X-rays and Becquerel discovered radio-activity. The advances made in the design of transformers, in valve and tube construction, in metallurgical processes and in nuclear knowledge have produced machines which are probably further removed from Roentgen's original apparatus than a Comet airliner is from the Wright's original aeroplane.

Roentgen's original apparatus consisted of a few bits of wire, an induction coil and a tube which bears very little resemblance to the present X-ray tube. A comparison with some modern research apparatus (which goes up to as much as 100,000,000 volts)⁷ emphasizes that the advances made in the radiation field are undoubtedly greater than in any other field of human endeavour. This knowledge (gained since Roentgen's time) has led to the development of the atomic bomb.

What can radiation do in the radical (as distinct from the palliative) treatment of cancer, and why cannot we do more? We shall attempt to discuss these points.

APPARATUS

The available sources of radiation for cancer treatment are X-rays, radium, radon and, in more recent years, the radio-active isotopes.

The developments in X-ray apparatus have produced a great variety of instruments available in every X-ray department for dealing with growths of various sizes in different sites. Low-voltage machines (up to 8 kilovoltage—the Grenz ray or Bucky ray machines) for treating very superficial lesions, are of doubtful value even for the most superficial tumours. There is some controversy over the value of these ultra-soft rays, but they can be dismissed from any place in cancer therapy. Because the penetrative power of the rays varies with the kilovoltage, there has been a striving for

higher kilovoltages to enable a sufficient radiation dose to be delivered to tumours at a depth. The very soft (low voltage) Bucky rays consequently do not penetrate more than the superficial layers of the skin. There are very few benign skin conditions which can be treated even with these rays or which should be treated with X-rays of any kind in any case.⁸

In the range to 60 K.V. (superficial radiation) for skin conditions, apparatus such as the Chaoul or Philips type is used for contact or intra-cavity X-ray therapy. This range is very useful for a variety of superficial conditions, e.g. rodent ulcers, epitheliomata, and even inside the mouth under certain conditions.⁹ The Chaoul apparatus was originally designed for gynaecological conditions, e.g. carcinoma of the cervix, at a higher kilovoltage. It is easily handled, has a short target-skin distance and consequently rapidly falls off in intensity in depth, thus not affecting the deeper structures under the skin.

The medium voltage range (up to 180 K.V.) was used in the early years of the century because of the difficulties in generating higher voltages and the 200 K.V. machine developed later was standard between about 1920-1930. To-day the standard X-ray machine is the 200-260 K.V. range. This is the unit universally used for what is generally called deep X-ray therapy. Above this is the super-voltage range which goes up to 1-2 million volts, used only in certain centres in recent years. In Britain there was only one 1-million volt machine (installed at St. Bartholomew's Hospital, London, about 1934)¹⁰ until 1950 when three 2-million volt machines of the van de Graaff electrostatic type (imported from Boston) were erected at the Westminster Hospital, the Cancer Hospital in London, and at Sheffield.

In the United States there have been 1-million volt machines in various parts of the country since the war years. But these machines are not the answer to the cure of cancer. The 1-million volt machine has not cured cancers which have not been curable by the 250 K.V. range. The 2-million volt machine of the van de Graaff type in its present form was introduced in Boston in 1947 although there was a 3-million volt machine of the older electrostatic type at M.I.T. and a 1,200 K.V. machine at the Massachusetts General Hospital (Boston). Though these machines are of such high voltage, they have not produced startling or dramatic results

more often than have the standard 250 K.V. machines.

A different principle in high kilovoltage is applied in the betatron (invented by Kerst¹¹) in which a negatively charged or beta particle is accelerated in a high electro-magnetic field to enormous velocities. The beta particles can be led out of the machine by various magnetic devices or they can be made to strike a target put in their way, when X-rays are generated. The betatron, only invented about 1940 (when it was in the region of 2.5 million volts) is now made up to 100 million volts. The betatrons used for therapy are only in about the 25-30-million volt range. No cures have been reported with these machines which cannot be obtained with any other standard X-ray machine, e.g. 250-260 K.V. It may be easier to treat a patient with them, but very few reports have so far been published on the treatment of cancer with the betatron. Cambridge has a betatron and there is a synchrotron (a modification of the betatron) at Manchester, installed in 1953. The results of the treatment of brain tumours with the betatron at the Cancer Hospital in London¹² were not startlingly successful, although said to be 'encouraging'.

The advantage of the betatron over the X-ray machine is that the energy in the betatron beam is given up at the end of the beam. If a tumour is located at 10-15 cm. depth, the energy (instead of being dissipated to a great extent in the tissues between the skin and the tumour) is delivered mostly to the tumour.

The cyclotron is a multi-million volt machine (invented by Lawrence in 1931). It is the so-called atom smasher, intended for nuclear research, and was the only way of creating radio-active isotopes until the atomic pile was invented. In the cyclotron a positive particle or a neutron is accelerated in 2 vacuum chambers separated from each other and known as Dees. As each particle crosses from one Dee to the other it is accelerated by an electro-magnetic field, tremendous velocities being generated.¹¹ Although these enormous machines are not intended for therapy for research, attempts have been made to treat cases with the neutrons generated.¹³ The results have not been good and the experiments have been stopped, owing to the marked reactions which resulted.

Why do we need these enormous machines and what is the difficulty in treating cases with them? First there is the enormous expense. The 2-million volt machine of even

the van de Graaff type costs about £30,000. Such a machine needs adequate protection for the staff and the patient. A surrounding 3-foot concrete wall is necessary. The beam has to be very carefully collimated to protect the patient. The machines are difficult to keep going. The running expenses are enormous. Teams of physicists and engineers must keep the machines in operation. Nobody has attempted to work out the actual cost of running a 2-million volt machine.

In Great Britain machines such as the van de Graaff are run at public expense, which is probably divided between various departments. A complete picture of the running costs is therefore not available. If there is a team of physicists at a hospital (and in some of the hospitals in Great Britain there are actually more physicists than radiotherapists) and if they are employed on research but have to drop their work to service the machine when there is a breakdown, it becomes difficult to proportion their salaries. But unless the physicists are there the machine could not be kept going.

The cost in tube life is enormous. Tubes cost £1,500 each and the life of a tube is not very great. The cost of treatment per patient in tube life alone (apart from all other expenses) is not less than £5. This also applies to machines such as the betatron, said to be as unreliable and temperamental as a *prima donna*. Some days it will work and some days for no apparent reason it will not work at all.

In 1948 a design for a linear accelerator was suggested.¹⁴ A negative particle is injected into an evacuated tube which conducts radio waves. The particle can be imagined riding on or just beyond the crest of a wave, as in surfing. Tremendous voltages and high outputs can be obtained by these machines. The standard type is about 4 million volts. An 8-million volt machine has been erected at the Post-Graduate Hospital, London, within the last 2 years and a 15-million volt linear accelerator, more recently still at St. Bartholomew's Hospital,¹⁵ but no results of treatment have yet been recorded. A 100-million volt machine exists in the U.S.A. for experimental purposes.

These machines cannot be used without a team of physicists constantly calculating the dosage delivered by these rays and the radiation distribution before a single patient can be treated. To treat successfully, and to avoid doing the patient any harm, intricate calculations and a constant watch are required by a team of physicists. Tremendous harm can

be done with these machines if this is not borne in mind. To get over the difficulty of the expense and the space required for these machines, attempts have been made to compromise or to get the same effect with standard machines of 250 K.V. range by special devices to improve their depth dose.

The more penetrating power of high voltage radiation delivers a lethal dose to a tumour more easily than does lower voltage radiation. With voltages below 200 K.V. it may be impossible (by standard methods) to deliver a tumour lethal dose in depth; but supervoltage radiation may at times do this through a single portal, with the advantage that it upsets the patient less as the beam has clear-cut margins and goes straight for the tumour without side scatter of the rays. A smaller volume of tissue is therefore irradiated. The general disturbance depends on the volume and to some extent on the type of tissue irradiated. The irradiation of the abdomen will cause more upset than that of a limb.

How then do radiations reach a tumour with the voltages of 200-250 K.V.? The amount of radiation reaching below the skin surface depends on the penetrating power of the rays as well as on the inverse square law. The further the tube is away from the skin, the greater will be the proportion of rays reaching the tumour under the skin in relation to the quantity of radiation on the skin itself. One of the limiting factors in radiation therapy under standard conditions is the effect on the skin; the skin being nearer the tube than the underlying tumour gets a bigger percentage of the rays, and may ultimately be destroyed before the tumour has had sufficient radiation. To get over this difficulty what is known as multiple field radiation¹⁶ is adopted, i.e. a tumour is approached (e.g. in the brain or chest) from various directions so that the effect of the rays is not concentrated on any one area of skin. Thus, if the tumour will receive in depth 25% of the dose delivered to the skin, radiation through 4 portals will allow the tumour to receive 100% of the skin dose; but as even this may not be enough to deliver an adequate dose with kilo-voltages up to 250, the number of fields is increased. A lung cancer may require 6,000 r units as the tumour dose to sterilize this tumour. The skin will tolerate say, 3,000 r units spread over a period of 6-8 weeks. If only 25% of all the skin doses (viz. 750 r) are delivered through each portal, 8 portals will need to be arranged around the tumour so that the 6,000 r are delivered. We have actually used (for the

treatment of lung cancer) 16 portals angulated and directed with so-called beam directions at the tumour—8 portals in front and 8 behind.

Thus by increasing the number of portals we can have a ring of radiation round the chest; hence the idea of rotation therapy, whereby the patient revolves around the tube or the tube revolves around the patient (completely, almost completely or in the arc of a circle only, as in the pendulum type of apparatus). In this way the depth dose is increased without affecting any one portion of the skin too much. For treatment of oesophageal cancer, the patient (in the erect position) can be revolved on a chair, the oesophagus being kept in view the whole time by continuous screening after he has been given a mouthful of barium. This rotation therapy has been termed the poor man's super-voltage machine because it has the same effect as super-voltage in getting better depth doses.

These machines have the disadvantage that they require competent physicists to work out the dose obtained from the intricate movements of the machines. A great deal of phantom experimenting is necessary and even with a number of hospital physicists available, it is by no means easy to determine the dose accurately. If it were, the manufacturers would soon have indicated the doses under certain conditions. In the tables given by some manufacturers the discrepancy may be as high, under certain conditions, as 50%. Instead of a dose of 4,000 r the dose actually delivered may be either 2,000 r or 6,000 r. This is not nearly accurate enough.

One of us (M. W.) has seen, in various parts of the world, the damage caused by these machines even where physicists are employed. We have seen a cancer of the skin form as the result of the radiation because it was in the direct circle of radiation. We have seen violent reactions in the mouth and throat from convergent beam apparatus, one type of rotating apparatus. It is sheer folly to introduce these machines into places where they may cause great harm if competent physicists are not available, when (without risk) the skilled radiotherapist may get the same result by care and ingenuity with less danger by well-established methods of standard radiotherapy for which accurate data on depth dosage are available.

Despite depth doses and depth charts, disastrous consequences can result from over-enthusiasm if the radiotherapist lacks experience. We have seen the chest wall necrosed

because the dose was delivered too quickly in post-operative therapy for carcinoma of the breast; also necrosis of the skin over the vertebrae because of injudiciously heavy doses in fields improperly placed. M. W. has been consulted about a transverse myelitis caused by over-irradiation of the cervical region and we have seen necrosis of the skin of the nose for the treatment of a rodent ulcer in a young woman because of over-radiation. If these disasters can happen with standard X-ray therapy, it will be realized what may happen with the more powerful instruments when they are not skilfully used. The aim of the radiotherapist should be never to cause a patient more pain and suffering by his treatment. The patient (particularly the cancer patient) should never be worse off after the radiation than he was before.

OPSOMMING

Ondanks die geweldige uitbreiding van ons kennis gedurende die afgelope 60 jaar is daar net 25 kanse uit 100 dat kankerslagoffers genees kan word deur die toepassing van die behandelingsmetodes wat vandag beskikbaar is. 'n Verdere 25% kan genees word as pasiënte hul dokters vroeër raadpleeg.

Daar is vandag 'n groot verskeidenheid van X-straal-masjiene vir die behandeling van kanker in verskillende dele van die liggaam.

Afgesien van die laagspanningsmasjiene vir vlakgeleë letsels en die standaard-masjiene van 250 K.V. wat in algemene gebruik is, word super-hoogspanningsmasjiene nou ook vervaardig. Hulle is egter geweldig duur en kan alleen met behulp van blywende spanne natuurkundiges in stand gehou word. Hoewel hulle behandeling vergemaklik, doen hulle nie juis beter genesingswerk as die standaard-masjiene nie.

Masjiene met 'n selfs hoër stroomspanning soos die betatron (25-30 miljoen elektronvolt) kan ook vir terapie gebruik word. Kragtiger betatrons (tot 'n duisendmiljoen volt) is vir eksperimentele doeleindes beskikbaar. Die siklotron (nog 'n multi-miljoen-volt-masjien) was die enigste middel vir die produksie van radio-aktiewe isotope voordat die atoomsuil ontdek is.

X-straal-behandeling met behulp van multi-miljoene volt word moontlik gemaak deur die lineêre versneller, maar tot dusver is geen terapeutiese resultate aangemeld nie.

Stralingsbehandeling word beperk deur die effek wat dit op die vel het. Dit kan egter voorkom word deur voorsiening te maak vir veelvuldige poorte. 'n Ononderbroke stralingsband kan dus rondom die liggaam in die nabyheid van die gewas aangelê word—'n rotasietherapie. Spesiale masjiene word vir hierdie doel vervaardig; die buis word of rondom die pasiënt geplaas, of die pasiënt word in 'n vaste uitstralingsveld gedraai (soos by die behandeling van kanker van die slukderm).

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(To be continued)

RADIOLOGICAL CASE BOOK

I. A CASE OF ILEO-ILEO-COLIC INTUSSUSCEPTION

WITH A NOTE ON ITS REDUCTION BY BARIUM ENEMA

HARRIS JACKSON, M.R.C.S., ENG., L.R.C.P., LOND., D.M.R.

Johannesburg

This case illustrates several features in the barium enema treatment of intussusception.

A girl aged 4½ months was admitted because of intermittent abdominal pain of 3 hours duration. The pain had commenced suddenly and it occurred in attacks at approximately 10 minute intervals. It was accompanied by flexion of the thighs, pallor and collapse. One moderately soft stool unaccompanied by blood or mucus had been passed since the onset.

She was pale, tense and irritable and cried with pain at intervals. Her temperature was 99.2° F, pulse rate 140 per minute and respiration rate 40 per minute. The abdomen was soft and there was no distension. No mass could be palpated and there was no emptiness in the right iliac fossa (*signe de Dance*). Peristaltic sounds were slightly exaggerated. No abnormality was detected on rectal examination.

RADIOLOGICAL INVESTIGATION

Gas without distension was visible in both large and small bowel and a few fluid levels were present. The characteristic signs of intussusception sometimes seen on the survey radiographs were absent.

The radiological interpretation at this stage was difficult. Such a picture can be produced by intermittent or incomplete obstruction. A barium enema was therefore done.

The enema flowed freely to the mid-transverse colon, where an obstruction was encountered.

Before this could be analysed or radiographed the barium passed on to the hepatic flexure and just beyond. At this point it was again held up, and an unusual picture of barium apparently entering the lumen of an intussusception was obtained (3 in Figs. 1A, 1B). The hydrostatic pressure of the enema was now slowly increased to 5 ft. and the obstruction was suddenly overcome, the barium flowing rapidly to the caecum and filling the appendix. The patient (previously tense, restless and occasionally whimpering or crying) suddenly relaxed and appeared to go to sleep. As the hydrostatic pressure should not be increased beyond 5 or 6 ft.,^{1,2} gentle

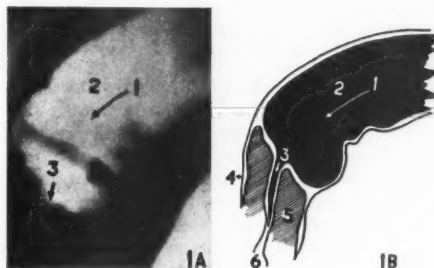


Fig. 1A and 1B

1. Direction of flow of barium.
2. Hepatic flexure.
3. Lumen of intussusception.
4. Intussusciens.
5. Intussusceptum.
6. Lumen of loop entering intussusceptum.

manipulation was performed intermittently over a period of about 15 minutes without succeeding in filling the terminal ileum. A persistent filling defect was demonstrated in the caecum at the site of the ileo-caecal valve (5 in Figs. 2A, 2B). This was interpreted as the apex (3 in Figs. 2A, 2B) of an incompletely reduced intussusception.

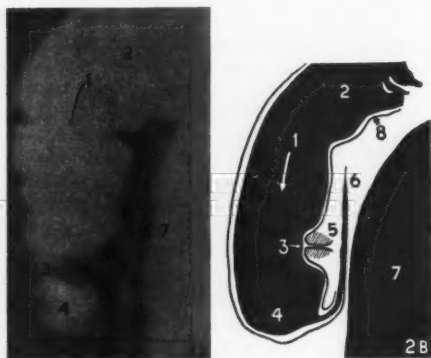


Fig. 2A and 2B.

1. Direction of flow of barium.
2. Hepatic flexure.
3. Apex of intussusception.
4. Caecum.
5. Intussusceptum.
6. Appendix.
7. Pelvic loop of colon.
8. Mucosa of bowel.

OPERATIVE FINDINGS

An intussusception of the ileo-ileo-colic type conforming to that shown in Fig. 2B was found by Mr. J. Lannon at operation. It was readily reduced. The patient made an uninterrupted recovery.

DISCUSSION

Radiology is by no means always necessary for the diagnosis of an intussusception. The clinical history and the typical stool, together with the characteristic mass in the abdomen, and/or the *signe de Dance*, are often quite sufficient. In other more prolonged cases the clinical picture is one of an acute intestinal obstruction in which the need for relief is obvious. The radiologist has a role in the diagnosis of the difficult case and in treatment of the suitable case.

Diagnosis is sometimes possible on the survey radiographs from the following signs, which may occur singly or together:

1. The soft tissue shadow of the intussusceptum

may be visible,³ and it may rarely be outlined by air.

2. The bowel entering the intussusceptum from the cranial aspect may be filled with gas and assume a characteristic truncated cone shape.⁴

3. The apex of the intussusceptum may be visible.^{3,5}

4. Attention may be directed to it by a crescentic cap of gas.⁶

On the other hand the picture may be quite non-specific, as in this case. It may be normal or it may be typical of an intestinal obstruction with fluid levels and distension.

The diagnostic criteria on the barium enema examination have been described fully by Rohan Williams¹ and by many others. They consist of an obstruction to the advancing barium column. The barium often outlines the apex of the intussusceptum to produce a cupola, and it characteristically infiltrates between the intussusceptum and the intussuscipts to produce a 'coiled spring' appearance. The barium rarely enters the lumen of the intussusceptum, as in this case.

The criteria for reduction by barium enema have been established by many workers who advise conservative treatment for all cases as soon as they are diagnosed, unless the history is of more than 24 hours' duration,⁷ or unless there is marked distension with fluid levels. Any departure from these standards must be undertaken with the greatest circumspection. Nevertheless, the writer has come across a few cases in which barium enema reduction was justified although the history was longer than 24 hours (even up to 72 hours). The first of these cases was a colo-colic intussusception which had persisted for 72 hours, and which was reduced accidentally during an examination undertaken for diagnostic purposes only.

This patient was operated on and about 6 inches of the descending colon were found to be slightly swollen and oedematous at the site where the intussusception had been found radiologically.

Apparently cases of intussusception come to the radiologist only when they present difficulty in clinical diagnosis. The early cases of less than 24 hours' duration are usually operated on without the benefit of a prior attempt at radiological reduction. The later cases presenting as intestinal obstruction with fluid levels and distension are unsuitable for treatment by barium enema. The radiologist may with caution attempt to reduce cases of more than 24 hours' duration when the obstruction is not complete and there are no fluid levels or distension. These are the clinically difficult cases in which the abdominal mass is usually not palpable. Where air is

present distal to the intussusceptum, it is additional evidence of incomplete obstruction and therefore of the absence of strangulation. In these cases the intussusception may be quite easy to reduce.

The enema has been used to reduce intussusceptions, probably since antiquity, but it is only safe when the reduction can be assessed under fluoroscopic control. Flooding of the terminal ileum and complete clinical relief are 2 essential criteria of success. Both must be achieved and the abdominal mass must disappear. Furthermore, the clinical relief must be absolute and maintained. In these circumstances other tests, such as the administration of charcoal to observe its passage through the bowel, are probably redundant.

The major objections to this method of treatment are:

1. It may lead to unnecessary delay in operation when reduction is not achieved. Under proper conditions this need not be so. This disadvantage, if it exists, is outweighed by the facilitation of the operation resulting from the partial reduction.

2. The reduction may not be complete. If the 2 criteria of clinical improvement and flooding of the terminal ileum are satisfied, this risk is small.

3. The recurrence rate is higher than after surgical reduction, but the comparatively high incidence of successful permanent reductions outweighs this objection. The cases that do recur are no less amenable to subsequent surgery.

4. There are cases of ileo-ileo-ileal intussusception in which complete reduction cannot be achieved by an enema. These are very rare and the immediate post-enema course will soon show whether the reduction is complete. It is not known whether these cases would show the same clinical improvement as that shown by this patient when the intussusceptum was reduced as far as the ileo-caecal valve. It is

certainly a possibility that precludes absolute reliance on the immediate clinical improvement alone. It must be emphasized that whenever there is any doubt whether an intussusception has been completely reduced, the patient should be operated on immediately.

While some radiologists condemn the use of general anaesthesia for this procedure, others insist on the presence of the anaesthetist and the surgeon so that if the intussusception is not reduced under ordinary sedation, the attempt can be continued with anaesthesia. If this is still unsuccessful, the patient can be taken directly to the theatre for operation. In these circumstances the radiologist receives the full benefit of adequate relaxation for his procedure, and no time is lost if surgery is required. It would therefore appear to be a desirable technique.

SUMMARY

A case of ileo-ileo-colic intussusception is described.

The treatment of intussusception by means of a barium enema is discussed.

OPSOMMING

'n Geval van ileo-ileokolon-intussussepsie word beskryf.

Die behandeling van intussussepsie deur middel van 'n barium-lawement word bespreek.

I wish to thank Dr. M. Medalie for permission to submit this case for publication.

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ANISO-NYSTAGMUS

S. ETZINE, M.B., CH.B., D.O.M.S., ENG.

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A fundamental tenet of the ophthalmic creed is Hering's Law of Ocular Movement (1879) which states that the movements of the two eyes are equal and symmetrical. The cases of nystagmus described below are of some rarity and appear to fall outside the ambit of

Hering's Law, in that the ocular movements, while symmetrical, were not equal.

CASE REPORTS

Case 1. A female aged 30, of European descent, was seen in 1952 when a vertical

nystagmus of the left eye was noted. Naked-eye inspection of the right eye showed no apparent nystagmus, but on ophthalmoscopic examination of the fundus a fine, vertical, to-and-fro excursion of this eye was observed. Both eyes showed a low refractive error. The visual acuity of the right eye was 6/6, that of the left was counting fingers at 1 metre. No lesion was found to account for the amblyopia of the left eye, which was stated to be of long standing. A general neurological examination was negative.

Case 2. A White female aged 17 stated that her left eye had squinted since early infancy. On examination, a left convergent strabismus was seen. The squinting eye showed a vertical nystagmus. No nystagmus of the right eye was observed. Both eyes showed a low hypermetropic error on retinoscopy. The visual acuity was 6/6 in the right eye and the perception of hand movements in the left.

Case 3. A male aged 44 of European descent, stated that his right eye had been weak since birth. On examination, a rotatory nystagmus was seen in the right eye. A similar, but lesser nystagmus was present in the other eye. The visual acuity was counting fingers at 1 metre in the right eye and 6/36 in the left. There were corneal opacities in both eyes.

DISCUSSION

The cases described show a natural gradation in the amount of nystagmoid excursion in the

better seeing eye. In Case 2 it appeared to be wholly absent; in Case 1 it was of very fine degree; in Case 3 a fairly coarse nystagmus was present. To my mind there does not appear to be any fundamental distinction between unilateral and unequal nystagmus. The two conditions merge into each other and I would therefore suggest the use of the term aniso-nystagmus to cover both these forms.

In the cases of aniso-nystagmus here described the visual acuity was grossly defective in the eye showing the greater excursion. The visual defect appeared to have been present since early infancy and would seem to stand in a causal relationship to the anomaly of ocular motility. The sensory stimuli (or lack of them) which initiated the nystagmus, were thought to originate in the amblyopic eye, since the defect of vision was the only factor common to all the cases. In terms of Hering's law, one would expect the resultant motor impulses to spread equally to both eyes. In the above cases it would seem that the fixation reflex operating in the better eye was dominant over and had a damping effect on the impulse to nystagmus.

OPSOMMING

'n Geval van nystagmus wat oënskynlik buite die bestek van Hering se wet val, word beskryf. Die woord 'aniso-nystagmus' is gesmee om hierdie toestand te beskryf.

NEW PREPARATIONS AND APPLIANCES NUWE PREPARATE EN TOESTELLE

POLYCYCLINE

Bristol Laboratories announce the following new formulations of 'Polycycline' (Tetracycline HCl).

Description. Polycycline is a broad-spectrum antibiotic produced by fermentation from a new species of *Streptomyces* isolated by the Research Division of Bristol Laboratories.

Chemical study reveals that tetracycline differs from chlortetracycline by a single chlorine atom and from oxytetracycline by an OH group. The difference in chemical structure results in greater solubility than chlortetracycline and greater stability than either chlortetracycline or oxytetracycline.

Indications. Polycycline has a wide anti-microbial activity against Gram-positive and Gram-negative bacteria, certain rickettsiae, large viruses and against many strains of tetracycline-sensitive organisms that have become resistant to penicillin and streptomycin.

Dosage. For oral use the daily minimum dose

POLYCYCLINE

Bristol Laboratories kondig die volgende nuwe formuleringe van 'Polycycline' (Tetrasikline HCl) aan.

Beskrywing: Polycycline is 'n breë-spektrum-antibiotikum, geproduseer deur die gisting van 'n nuwe soort *Streptomyces* wat deur die Navorsingsafdeling van Bristol Laboratories geïsoleer is.

Skeikundige studie het aan die lig gebring dat tetrasikline van chloortetrasikline verskil deur 'n enkele chlooratoom, en van oksitetrasikline deur 'n OH-groep. Die verskil in skeikundige struktuur maak dit meer oplosbaar as chloortetrasikline, en gee die groter stabiliteit as of chloortetrasikline of oksitetrasikline.

Aanwysings: Polycycline het 'n omvangryke mikrobe-bestrydende uitwerking op Gram-postiewe en Gram-negatiewe bakterieë, op sekere rickettsiae, op groot virusse en op baie soorte tetrasikline-sensitiewe organismes wat weerstand teen penisilline en streptomisine ontwikkel het.

for adults is 1 gm. of Polycycline administered in doses of 250 mg. every 6 hours. Children require a dosage of 20 mg. per kilo body weight per 24 hours. The doses should be equally divided but given at 3- to 6-hour intervals. Treatment should be continued from 2 to 4 days after the patient becomes asymptomatic.

When oral therapy is not feasible, Polycycline Intramuscular may be injected, preferably deep into the gluteal muscle and the patient should, as soon as possible, be placed on oral medication.

Toxicity. Clinical studies in well over 500 patients indicate that tetracycline produces fewer side reactions than chlortetracycline and oxytetracycline. Preliminary studies reveal a lower incidence of nausea, vomiting and diarrhoea following the oral use of tetracycline than was observed previously with either chlortetracycline or oxytetracycline.

Precautions. The use of broad-spectrum antibiotics occasionally may result in overgrowth of non-susceptible organisms—particularly *Monilia*. Constant observation of the patient is essential in order to discover a superimposed infection. If new infections appear during therapy, appropriate measures should be taken.

How Supplied. Polycycline Capsules: 250 mg., 16's; 100 mg., 25's.

Polycycline Suspension: '250' Oral, 250 mg. per 5 c.c., 30 c.c.

Polycycline Pediatric Drops: 100 mg. per c.c., 10 c.c.

Polycycline Intramuscular: 100 mg. Single Dose vial.

STEREOTOMES

The latest aid for individual, private study or class use in medical schools or hospitals is in the form of coloured third dimensional slides called *Stereotomes* and are now available in South Africa.

Several volumes of these *Stereotomes* are in the course of preparation covering varied subjects. Available now is *A Visual Atlas of Congenital Heart Disease*, which has been compiled by James W. Brown, Esq., M.D., F.R.C.P., Regional Cardiologist, City General Hospital, Sheffield and L. M. Gerlis, Esq., M.B., M.R.C.S., L.R.C.P., Assistant Pathologist, Grimsby General Hospital.

This *Atlas* comprises 3 volumes each containing 24 slides with a volume of textual description in English. At the beginning of May this year Dr. Deller of Harvey & Blythe Ltd., the publishers of these *Stereotomes*, gave demonstrations in Dublin showing the effect of the slides when projected. He used a German Duplex 11 stereo projector, giving a throw of 60 feet. One evening the audience totalled 75 and another 75 could have viewed with ease. The response to the showings indicates that this method of teaching will be adopted in Dublin.

Stocks are held in South Africa by the sole agents, Gurr Surgical Instruments (Pty.) Ltd., P.O. Box 1562, Johannesburg.

THE 'CARDI-ALL' DIRECT-WRITING ELECTROCARDIOGRAPH

A new direct-writing electrocardiograph, the 'Cardi-All', is introduced to the South African medical

Dosis: Vir mondelinge gebruik is die daaglikse minimum-dosis vir volwassenes 1 gm. Polycycline, toegedien in dosisse van 250 mg. elke 6 uur. Kinders kry al om die 24 uur 'n dosis van 20 mg. vir iedere kilogram van hul liggaamsgewig. Die dosisse word gelykop verdeel, maar moet by tussenpose van 3 tot 6 uur toegedien word. Die behandeling word voortgesit gedurende 2 tot 4 dae nadat die pasiënt asimptomaties geword het.

Wanneer mondelinge terapie nie prakties is nie, kan Binnespiers Polycycline ingespuut word, by voorkeur diep in die boudspier in, en daar moet so gou moontlik na 'n mondelinge geneeswyse vir die pasiënt teruggekeer word.

Toxissiteit: Kliniese studies in die geval van aansienlik meer as 500 pasiënte het aangedui dat tetrasikline minder bykomstige reaksies meebring as of chloortetrasikline of oksitetrasikline. Voorlopige studies het aan die lig gebring dat daar minder mislikheid, braking en diarree voorkom ná die mondelinge gebruik van tetrasikline as wat vroeër waargeneem is in die geval van chloortetrasikline of oksitetrasikline.

Voorsorgsmaatreëls: Die gebruik van breed-spektrum-antibiotika kan die nie-vatbare organismes—en veral *Monilia*—te vinnig laat groei. Gedurige waarneming van die pasiënt is noodsaaklik om 'n supergeponeerde infeksie te ontdek. Indien nuwe infeksies hul verskyning tydens terapie maak, behoort geskikte maatreëls daarteen getref te word.

Hoe dit verskaf word: Polycycline-kapsules: 250 mg., 16's; 100 mg., 25's.

Polycycline-sweefmengsel: '250' Mondeling, 250 mg. per 5 k.s., 30 k.s.

Polycycline, Pediatriese Druppels: 100 mg. per k.s., 10 k.s.

Binnespiers Polycycline: 100 mg. Flessie bevatende 'n enkele dosis.

STEREOTOMES

Die jongste hulpmiddel by individuele, private studie of vir klasgebruik in mediese skole of hospitale is gekleurde drie-dimensie-plaatjies wat *Stereotomes* genoem word en tans in Suid-Afrika verkrygbaar is. Etlike bande of dele van hierdie *Stereotomes*, wat 'n verskeidenheid van onderwerpe dek, word tans voorberei. 'n Aansoulike atlas van aangebore hartkwalte (*A Visual Atlas of Congenital Heart Disease*) is reeds verkrygbaar. Dit is saamgestel deur James W. Brown, M.D., F.R.C.P., Streek-kardioloog, Algemene Stadshospitaal, Sheffield, en L. M. Gerlis, M.B., M.R.C.S., L.R.C.P., Assistent-patoloog, Algemene Hospitaal, Grimsby.

Hierdie *Atlas* bestaan uit 3 dele, elk bevatende 24 plaatjies, en 'n deel met tekstuele verduidelikings in Engels. Teen die begin van Mei vandeesjaar het dr. Deller, van die firma Harvey & Blythe Bpk., die uitgewers van hierdie *Stereotomes*, 'n reeks demonstrasies in Dublin gegee om die effek van die geprojekeerde plaatjies aan te toon. Hy het 'n Duitse Duplex 11-stereo-projektor gebruik wat die beeld 60 voet verwerp het. Een aand het sy gehoor uit 75 mense bestaan, en 'n verdere 75 sou die beelde met gemak kon gesien het. Die reaksie op die demonstrasies dui daarop dat hierdie onderliggende metode in Dublin aanvaar sal word.

Voorrade is in Suid-Afrika verkrygbaar by die alleenagente, Gurr Surgical Instruments (Pty.) Ltd., Posbus 1562, Johannesburg.

DIE 'CARDI-ALL' DIREKREGISTERENDE ELEKTROKARDIOGRAAF

'n Nuwe direkregistrerende elektrokardiograaf, die 'Cardi-All', word onder die aandag van die mediese

profession by Medical Distributors, P.O. Box 3378, Johannesburg.

By manufacturing all component parts in their own factory, wherever possible, the manufacturers have been able to keep the cost to an absolute minimum. The savings thus effected are reflected in the modest, competitive price of the Unit.

Another special feature of the apparatus is its light weight (27 lb.).

A special converter, which permits the 'Cardi-All' to work off an ordinary motor-car battery, is available at a reasonable price. This should be of particular interest to country practitioners.

The 'Cardi-All' has a dual-purpose 'Compamatic' circuit, resulting in automatic stylus protection and skin current compensation. Paper loading is simplified and takes only 10 seconds.

The 'Cardi-All' has been accepted by the Council on Physical Medicine of the American Medical Association and is guaranteed for 1 year.

An efficient service is being maintained by the Distributors and all spare parts and accessories are carried in stock.

professie gebring deur Medical Distributors, Posbus 3378, Johannesburg.

Deur alle moontlike onderdele self te vervaardig in hulle fabriek, is die vervaardigers in staat om die koste tot 'n absolute minimum te beperk. Die besparing as gevolg hiervan, word weerspieël in die lae, mededingende prys van die toestel.

Ander eienskappe van die apparaat is die ligte gewig van 27 lb., en die eenvoudige werking daarvan wat binne 'n halfuur aangeleer kan word.

'n Speciale stroomverwisselaar, deurmiddel waarvan die 'Cardi-All' van 'n gewone motorbattery gewerk kan word, is verkrygbaar teen redelike koste en behoort van besondere belang vir die platelandse geneeshere te wees.

Die 'Cardi-All' het 'n tweevoudige 'Compamatic' elektriese stroombaan met gevolglike outomatiese stylus beskerming, asook neutralisering van huidslektriesestroom. Die invoeging van papier is vereenvoudig en neem slegs 10 sekondes in beslag.

Die 'Cardi-All' word aanvaar deur die Raad van Fisiese Geneeskunde van die Amerikaanse Mediese Vereniging en dra ook 'n waarborg van 1 jaar.

'n Doeltreffende instandhoudingsdiens word gehandhaaf deur die distribuerders en alle onderdele en bykomstighede word in voorraad gehou.

TETRACYN

Pfizer Laboratories South Africa (Pty.) Limited, announce the availability of two new Tetracycline products. Tetracycline is the Pfizer brand of tetracycline, discovered by the Research Division of Chas. Pfizer & Co. Inc., Brooklyn, New York.

Tetracycline Oral Suspension. Dry powder containing amphoteric Tetracycline equivalent to 1.5 grammes, reconstituted by the addition of water to 1 oz. Each teaspoonful (5 c.c.) contains 250 mg. of antibiotic.

Tetracycline Pediatric Drops. Dry powder containing amphoteric Tetracycline equivalent to 1.0 gramme, reconstituted by the addition of water to 10 c.c. Each c.c. contains 100 mg. of the antibiotic. Supplied with a dropper calibrated at 25 mg. and 50 mg.

These products are designed as alternative dosage forms to Tetracycline tablets, and are well adapted for paediatric use. For infants and children the daily dose is from 20-40 mg. per kilogramme body weight.

TETRACYN

Pfizer Laboratories South Africa (Pty.) Limited kondig aan dat twee nuwe Tetracycline-preparate tans verkrygbaar is. Tetracycline is die Pfizer-merk van tetracycline wat deur die Navorsingsafdeling van Chas. Pfizer & Co. Inc., Brooklyn, New York, ontdek is.

Tetracycline, Mondelinge Sweetmengsel: 'n Droë poeier bevattende amfoteriese Tetracycline gelykstaande aan 1.5 gram, gerekonstitueer deur die byvoeging van water tot 1 ons. Iedere teelepvol (5 k.s.) bevat 250 mg. antibiotikum.

Tetracycline, Pediatrisse Druppels: 'n Droë poeier bevattende amfoteriese Tetracycline gelykstaande aan 1.0 gram, gerekonstitueer deur die byvoeging van water tot 10 k.s. Iedere k.s. bevat 100 mg. antibiotikum. Word verskaf met 'n druppelaar, gekalibreer vir 25 mg. en 50 mg.

Hierdie preparate is ontwerp as alternatiewe dosis-vorms vir Tetracycline-tablette, en is uitstekend geskik vir pediatrisse gebruik. In die geval van suigeling en kinders is die daaglikse dosis 20-40 mg. vir iedere kilogram van die kind se liggaamsgewig.

REVIEWS OF BOOKS

THE BRITISH ENCYCLOPAEDIA OF MEDICAL PRACTICE

British Encyclopaedia of Medical Practice (Second Edition). Edited by the Rt. Hon. Lord Horder, G.C.V.O., M.D., F.R.C.P. (12 volumes of text, Pharmacopoeia and Index.) London and Durban: Butterworth & Co. (Publishers) Ltd.

The *British Encyclopaedia of Medical Practice* can claim to be one of the most authoritative single sources of medical information in the English language to-day. Practical, thorough, accurate and up-to-date, it constitutes a guide to which the medical

man can turn to in complete confidence for guidance on virtually every condition or ailment likely to arise in the course of a life-time's practice.

The whole work comprises 12 volumes of text, *Pharmacopoeia Volume* and *Index Volume*, and consists of articles covering the whole of modern medical practice and carries the authority of leading medical practitioners.

It is amply cross-referenced and arranged alphabetically to ensure quick and easy reference. Special prominence is given to diagnosis and treatment and, wherever practicable, allied disorders or diseases affecting particular organs or systems are grouped together.

The *Pharmacopoeia* contains full details of every

proprietary pharmaceutical preparation mentioned in the text volumes, and the whole work is linked by the separate *Index*.

Since it is essential that a work of such magnitude should always be up to date, a most effective service has been evolved whereby an annual *Cumulative Supplement* keyed to the 12 text volumes, keeps the *Encyclopaedia* always abreast of the developments of the day.

DERMATOLOGICAL TRENDS

Modern Trends in Dermatology: Second Series.

By R. M. B. Mackenna, M.A., M.D. (Camb.), F.R.C.P. (Lond.). (Pp. 327 + Index. With 58 illustrations. 71s.) 1954. London and Durban: Butterworth & Co. (Publishers) Ltd.

Efficient selection of topics and authors has once more produced a book of high standard. The practising dermatologist, always trying to catch up with current literature, will be grateful for masterly surveys of, and adequate references to, such subjects as cyto-diagnosis, tuberculosis, sarcoidosis and the use of antibiotics and cortisone; the research worker will find convenient summaries of much modern work in neuro-anatomy and neuro-physiology of the skin, allergy, bacteriology and mycology, to name only 4 subjects of many that are competently treated; and, above all, the contemplative scientist will find with pleasure that he is indeed allowed to glimpse modern trends, and not only modern inventions.

In a critical evaluation of psychosomatic medicine Ida Macalpine emphasizes the need for caution in this field and puts into their true perspective such subjects as the attempt to correlate personality types with particular patterns of skin disease. To say that it is indeed a modern trend for a psychiatrist to think scientifically is perhaps too cynical: most thinking people will, however, agree that it is a move in the right direction. Their approval will not be shared by the multitude who still regard the patient's psyche as a scapegoat for their own incompetence.

Another example of progress which involves a few steps backwards is the resumption of work on *beta-ray* emitters. These, practically abandoned until recently, now promise to provide another use for radio-isotopes.

There are many practical applications of the work summarized in this volume: among them should be noted the uselessness of manual epilation in *Microsporum* ringworm of the scalp, for traction breaks the infected hair at the level of Adamson's fringe and leaves an infected proximal portion to grow again. Pillsbury and Kligman provide an excellent review of current problems in cutaneous bacteriology, effectively following up Burtenshaw's article in the *First Series*. Their summary should be read by every practising dermatologist. The few examples given are not to be regarded as more than a random selection from a mass of admirable work, for it is impossible to review adequately a collection of 17 thorough summaries.

As an example of how rapidly dermatology is progressing, we may note that aldosterone and halogen compounds of cortisone are not mentioned in Sulzberger's lucid contribution. The omission of ACTH and cortisone from the list of substances likely to be of value in allergic dermatoses, in another article by a different author, cannot be forgiven in a volume purporting to outline modern trends. His examples of the use of specific desensitization in contact eczema are out of place in this

volume, for, if verified in a larger series, they would be a revolutionary advance and quite at variance with the findings of most other workers; if examples of the *post hoc* fallacy, they would of course be merely misleading.

The print and binding of this book are adequate and the illustrations excellent. There are many typographical errors—one on the first page—which suggest that in the *Third Series* (which we await with impatience) the Editor might include a competent proof reader among the list of helpers to whom he expresses his indebtedness.

BEDSIDE DIAGNOSIS

Bedside Diagnosis. By Charles Seward, M.D., F.R.C.P. (Edin.). Foreword by Sir Henry Cohen, M.D., D.Sc., LL.D., F.R.C.P., F.F.R. (Pp. 395 + Index. With illustrations. 18s. 6d.) 3rd ed., 1955. Publishers: E. & S. Livingstone Ltd. Edinburgh and London.

The continuing advances in therapeutics and in refined methods of investigation have had the unfortunate effect of distracting the attention of the medical student from what will always be the most important and exacting of his tasks—the consideration, assessment and sympathetic understanding of the sick person.

One of the purposes of this book is to preserve, in a time of flux, the traditional approach which cannot be out-dated and which has been characteristic of the best British medicine.

Starting with the premise that a patient consults a doctor because of a symptom and that the basic symptoms of which a patient can complain are comparatively few, Dr. Seward has planned his book in a way which deals with 20 symptoms in as many chapters. Each chapter then offers a synopsis of the causes of the symptom, the physiology of the symptom, the diagnostic approach and a consideration of each cause or disease responsible for the symptom.

The information provided in this refreshingly novel form is accurate and in so far as its mode of presentation encourages the use of eyes, ears, hands, and the 'scopes', it becomes a most useful practical manual not only for the medical student but also for the practitioner of any status whose approach to illness has become fogged by laboratory tests and gadgets.

CARDIOGRAPHY

Cardiography. By William Evans, M.D., D.Sc., F.R.C.P. (Pp. 212 + Index. With 378 illustrations. 51s. 9d.) 2nd ed., 1954. London and Durban: Butterworth & Co. (Publishers) Ltd.

The purpose of this book on electrocardiography and phonocardiography is to help the student preparing for a qualifying or higher examination in Medicine, and especially to assist hospital medical officers called upon to report on occasional cardiograms. The author has been eminently successful in achieving this purpose by a lucid, concise style and excellent reproductions.

It is doubtful, however, if the omission of the theoretical background of electro-physiology will allow the undergraduate to appreciate the limitations of electrocardiography. The memorizing of long lists of diagnostic criteria based on empirical

observations is an unnecessary burden when the same results may be achieved by an understanding of a relatively few basic principles.

The arrhythmias are discussed in a simple and practical style and the numerous unsubstantiated theories that are currently used to explain the abnormal mechanisms are justifiably avoided.

The value of electrocardiography is based to-day largely upon its ability to detect myocardial damage and chamber enlargement. A large and useful amount of information is now available in regard to voltage (V) chest and extremity leads. The author however, is a protagonist of CR chest leads. This view is untenable on theoretical grounds. In addition, it is impossible to translate the extensive amount of information extant in regard to the V leads into CR leads. In this regard the student or practitioner who uses CR leads will have to be guided by the empirical and largely unconfirmed observations of a relatively few investigators who use CR leads.

The ability of the electrocardiogram to diagnose left and right atrial enlargement, singly or together, is well described in the Continental medical literature. Evans has summarized these findings in what must be one of the few statements on this problem that is available in English.

A feature of this book is a description of the minor electrocardiographic changes that may be found with slight myocardial damage of coronary artery disease. This undoubtedly important aspect of electrocardiography, however, can only be interpreted with a knowledge of the host of conditions other than myocardial damage which may cause similar changes. This section of the book is singularly lacking in a discussion of such problems.

The section on heart sounds and phonocardiography is excellent and surpasses by far the similar section in the first edition of this book. This is partly due to advances that have been made in phonocardiography, particularly the work of Dr. A. Leatham, who was closely associated with Dr. Evans. A feature of this presentation is a discussion of the significance that may be attached to auscultatory findings.

Any author who attempts to present a complex subject in a simple way must necessarily make statements that will not be agreed to by all workers in this field. In this regard, Dr. Evans' book is no exception. It can, however, be recommended wholeheartedly for the purposes for which it was written.

STONE IN THE URINARY TRACT

Stone in the Urinary Tract. By H. P. Winsbury-White, M.B., Ch.B., F.R.C.S., Ed., F.R.C.S., Eng. (Pp. 328 + Index. With 144 illustrations. 71s.) 2nd ed., 1954. London and Durban: Butterworth & Co. (Publishers) Ltd.

This book, founded on the personal practice of one of the best known of the older school of British urologists, is interesting to all who practise the craft, as it concerns itself mainly with tables, facts and figures of a pre-sulphonamide, pre-antibiotic and pre-infusion era.

It is depressing to read in this up-to-date second edition that intramuscular and rectal drips are to be preferred to intravenous therapy which, in any urological patient over middle age, is considered highly lethal; nor does one accept the statement that infection is the all-important factor in primary stone in the renal tract.

Many of the illustrations are of well-known surgical and urological instruments and as such have no place in a book of this type; nor have perineal,

transperitoneal and parasacral approaches to the lower ureter. These are better relegated to the limbo of past days.

The many references quoted at the end of each chapter are more impressive in number than useful, in that most of them are out of date. The more modern references, after the war years, are very few.

It is distressing to find so many misprints, to see proper names such as Zuckerkandl and De Pezzar misspelt, and to see blocks reversed; all of which suggest to this reviewer a carelessness one has reason not to expect in a modern monograph.

MULTIPLE (DISSEMINATED) SCLEROSIS

Multiple Sclerosis. By Douglas McAlpine, M.D., F.R.C.P., Nigel D. Compston, M.A., M.D., M.R.C.P. and Charles E. Lumsden, M.D. (Pp. 293 + Index of Authors + Index. With 32 illustrations. 35s.) 1955. Publishers: E. & S. Livingstone: Edinburgh and London.

This comprehensive and outstanding production should remain the standard reference in English for years to come. The authors (who prefer the term multiple to disseminated sclerosis) have in each chapter critically reviewed the pertinent literature and where necessary have introduced and compared their own large series of well-studied cases. The result is a pleasing and logical presentation of facts and deductions.

The low rate in South Africa is stressed, but a perusal of relevant chapters suggests to the reader that wider histo-pathological studies might confirm this reviewer's own clinical impression that the local incidence is greater than our literature indicates, though still much less than in other climes.

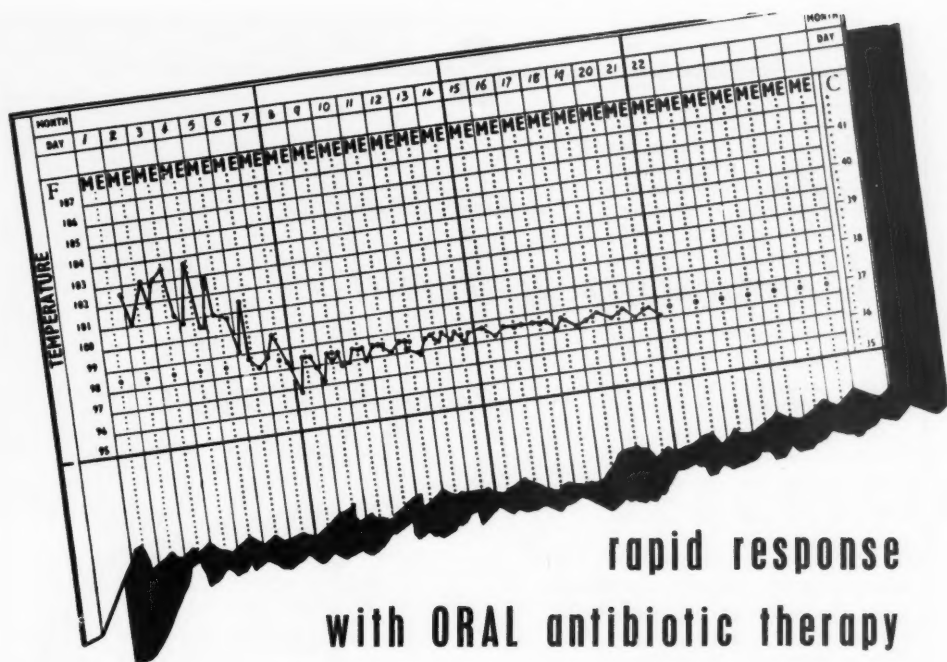
It is argued that, despite contrary views, multiple sclerosis is a specific pathological entity. It shows a definite family incidence and it has never been seen or produced in animals other than Man. The various theories of aetiology are discussed but the real cause remains unknown. However, many factors do precipitate attacks. These include fatigue, trauma, emotion, infections, allergic diseases, blood transfusions and toxic drugs, and may even determine the site of pathology. This should be kept in mind if relapses are to be lessened.

The patient as well as the disease must be treated. A negative therapeutic approach is deprecated. Physiotherapy and rehabilitation (as taught to traumatic paraplegics) are important. The various medicinal therapies introduced from time to time are regarded as without specific effect, though no mention is made of the recently boosted bacterial pyrogen, Piromen.

Doubt is thrown on a few cherished beliefs, e.g. the significance of absent abdominal reflexes in young people. Henderson studied 844 healthy students and in a personal communication to the authors stated that absent abdominal reflexes were not rare. (Some 10 years ago this reviewer examined healthy students in Johannesburg and made a similar finding). The time elapsed since an attack is not significant in determining whether the cerebrospinal fluid will show abnormalities. The progress of the disease is better than was previously thought and even after 20 years a quarter of those afflicted still possess unrestricted activity.

The clarity of the 32 full-page plates demonstrating pathology is remarkable and probably unexcelled in any similar previous production.

This book is well worth studying and should be in the library of all interested in diseases of the nervous system.



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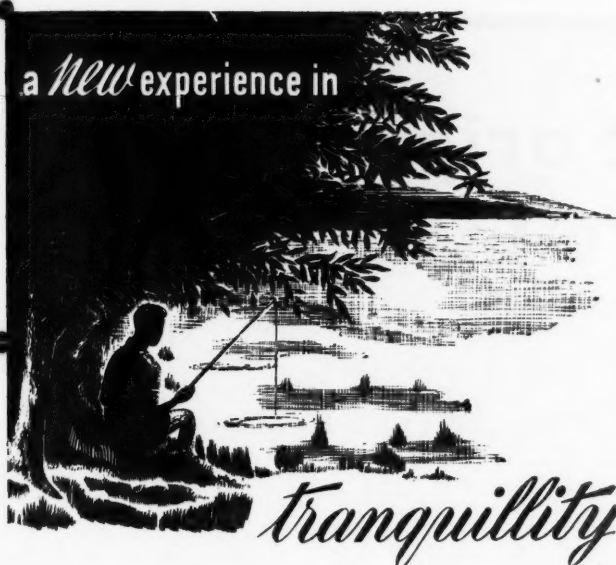
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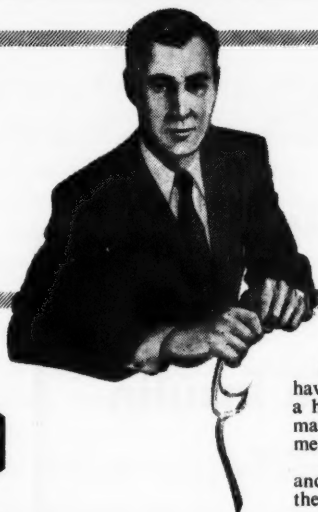
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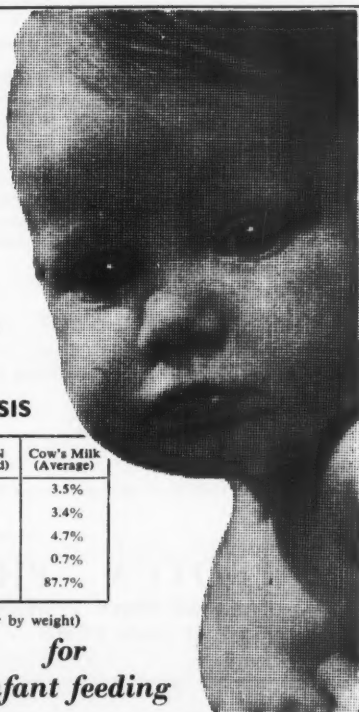
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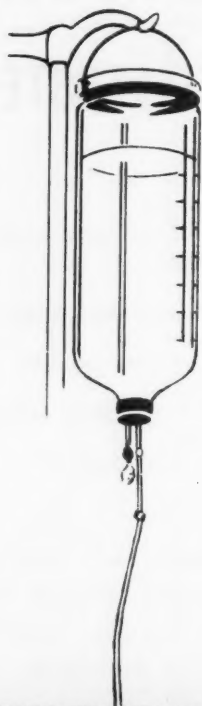
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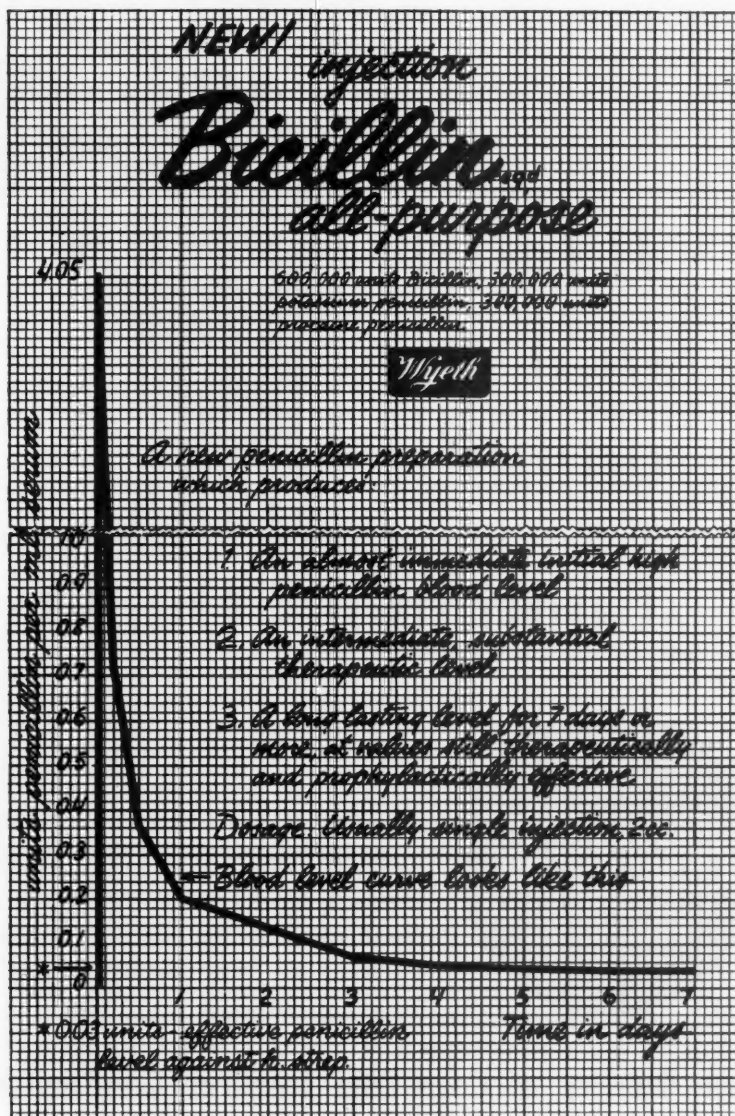
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- 3** Mictine can be used where all types of cardiac and renal diseases are involved.
- 4** Mictine causes no electrolyte imbalance. There is no risk of either sodium or potassium depletion.
- 5** It has a very low incidence of gastro-intestinal irritation, in contrast to the highly irritating qualities of mercurial diuretics.
- 6** The patient will not develop a tolerance to Mictine.

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